DOCUMENT RESUME

ED 033 237 VT 009 563

Microfiche Collection of Clearinghouse Documents Reported in Abstracts of Research and Related Materials in Vocational and Technical Education (ARM), Fall 1969.

Ohio State Univ., Columbus. Center for Vocational and Technical Education.

Spons Agency-Office of Education (DHEW), Washington, D.C.

Pub Date 69

Note-2,364p.

EDRS Price MF-$8.50 HC Not Available from EDRS.

Descriptors-*Annotated Bibliographies, Clearinghouses, *Educational Research, Indexes (Locaters), Information Dissemination, Resource Materials, *Technical Education, *Vocational Education

Documents announced with VT numbers only in the Fall 1969 issue (VT 009 622) of "Abstracts of Research and Related Materials in Vocational and Technical Education" (ARM), are included in this microfiche set. Microfiche availability for these documents is shown on the ARM resume as MF AVAILABLE IN VT-ERIC SET. The michofiche set is arranged in the following sequence: (1) a Vocational Technical (VT) number index to documents in the microfiche collection, (2) The author index, the vocational and supporting service index, and the subject index from ARM, and (3) the full text of documents listed in the VT number index. The texts are filmed continuously in VT number sequence. (CD)

VT009 563

ED033 237

Microfiche Collection of Clearinghouse Documents Reported in Abstracts of Research and Related Materials in Vocational and Technical Education

(ARM)

Compiled and Indexed by The ERIC Clearinghouse
on Vocational and Technical Education

FALL 1969

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VT009563

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INTRODUCTION

This collection of microfiche consists of the documents which are announced with VT number only in the Fall 1969 issue of *Abstracts of Research and Related Materials in Vocational and Technical Education (ARM)*. Microfiche availability is shown in the resume as MF AVAILABLE IN VT-ERIC SET. The documents are grouped in VT number sequence and filmed continuously as a microfiche set. These documents are not available on microfiche as individual items, but are obtainable only through purchase of this set, or from agencies who have this set and have the capability of reproducing microfiche. The microfiche set includes the following sections:

1. *Vocational Technical (VT) Number Index to Microfiche Collection of Clearinghouse Documents Reported in ARM, Fall 1969*.

2. Selected indexes from *ARM, Fall 1969*.

   a. Personal and Institutional Author Index.
   b. Vocational and Supporting Services Index.
   c. Subject and Identifier Index.

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ALABAMA STATE EMPLOYMENT SERVICE, MONTGOMERY
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AMERICAN INDUSTRIAL ARTS ASSOCIATION, WASHINGTON, D.C.
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ARIZONA OCCUPATIONAL RESEARCH COORDINATING UNIT, PHOENIX
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Teacher Educator Conference Report. (Casa Grande, Arizona, November 7-8, 1968).

ARIZONA STATE DEPT. OF VOCATIONAL EDUCATION, PHOENIX
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An Instrument to Evaluate Manpower Development Training Act Institutional Training Projects in Arizona.

ARKANSAS LEGISLATIVE COUNCIL, LITTLE ROCK. RESEARCH DEPT.
VT 004 275 ED 022 865 20
Vocational and Technical School Programs of Selected States.

ARNOLD, WALTER M.
VT 001 820 ED 019 407 6
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ATOMIC ENERGY COMMISSION, WASHINGTON, D.C.
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Studies in Workmen's Compensation and Radiation Injury, Volume I.
VT 003 649 ED 015 275 44
Studies in Workmen's Compensation and Radiation Injury, Volume II.
VT 003 650 ED 015 276 44
Studies in Workmen's Compensation and Radiation Injury, Volume III.

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VT 003 857 ED 015 295 50
The Current Employment Market for Engineers, Scientists, and Technicians.

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BALL STATE UNIV., MUNCIE, IND. DEPT. OF INDUSTRIAL EDUCATION AND TECHNOLOGY
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BRITISH ASSOCIATION FOR COMMERCIAL AND INDUSTRIAL EDUCATION, LONDON (ENGLAND)
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VT 005 603 84
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BROOKING, WALTER J.
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The Development and Use of an Instrumentation Technology Curriculum Guide.

BROOKOVER, WILBUR B.
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Automation, the Impact of Technological Change.

BUREAU OF EMPLOYMENT SECURITY (DOL), WASHINGTON, D.C.
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Manpower Development and Training Act of 1962, MDTA Handbook. Chapter II, Training Needs Survey.
VT 006 359 ED 027 379 96
Counselor's Desk Aid; Eighteen Basic Vocational Directions. Summary Information.

BUREAU OF LABOR STANDARDS (DOL), WASHINGTON, D.C.
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Occupational Outlook Handbook, Employment, Information on Occupations for Use in Guidance, 1966-67.
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BUREAU OF SOCIAL SCIENCE RESEARCH, INC., WASHINGTON, D.C.
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COMMISSION ON MANPOWER, AUTOMATION, AND TECHNOLOGY, BERKELEY, CALIF.
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CONGRESS OF THE U.S., WASHINGTON, D.C. JOINT ECONOMIC COMMITTEE
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CONGRESS OF THE U.S., WASHINGTON, D.C. SENATE COMMITTEE ON LABOR AND PUBLIC WELFARE
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History of Employment and Manpower Policy in the United States. Parts I and II.
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CONNECTICUT STATE DEPT. OF EDUCATION, HARTFORD
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CONNECTICUT STATE DEPT. OF EDUCATION, HARTFORD. DIV. OF VOCATIONAL EDUCATION
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DEPARTMENT OF AGRICULTURE, WASHINGTON, D.C. AGRICULTURAL RESEARCH SERVICE
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The Hired Farm Working Force of 1966, a Statistical Report.

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Training Health Service Workers--The Critical Challenge, Proceedings of the Conference on Job Development and Training for Workers in Health Services, 1966.
VT 004 360 ED 021 996 22
Advisory Committee on HEW Relationships with State Health Agencies Report to the Secretary, December 30, 1966.

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VT 003 649 ED 015 275 44
Studies in Workmen's Compensation and Radiation Injury, Volume II.
VT 003 650 ED 015 276 44
Studies in Workmen's Compensation and Radiation Injury, Volume III.
VT 003 668 MP 000 206 45
New Challenges--New Responsibilities. (Excerpts from Remarks to Community Service Workshop, 1966).
VT 004 358 ED 021 055 22
Training Health Service Workers--The Critical Challenge, Proceedings of the Conference on Job Development and Training for Workers in Health Services, 1966.

DEPARTMENT OF LABOR, WASHINGTON, D.C. LIBRARY
VT 004 375 ED 021 998 54
Labor Mobility, Selected References.

DEPARTMENT OF NATIONAL EDUCATION, SAIGON (SOUTH VIETNAM)
VT 002 839 ED 020 319 15
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DETROIT PUBLIC SCHOOLS, MICH. PROGRAM EVALUATION SECTION
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VT 002 190 ED 020 306 10
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A Proposed Long-Range Plan for Occupational and Vocational-Technical Education for Rhode Island. Preliminary Report.

EMPLOYMENT SERVICE (DOL), WASHINGTON, D.C.
VT 003 697 ED 016 088 45
Guide to Local Occupational Information.
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The Current Employment Market for Engineers, Scientists, and Technicians.

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FUTURE FARMERS OF AMERICA, WASHINGTON, D.C.
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VT 006 282 96
Vocational Agriculture and the FFA.

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VT 005 631 ED 021 070 95
Worker Adjustment--Youth in Transition from School to Work, An Annotated Bibliography of Recent Literature. Bibliography 2.

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Determining Competencies for Initial Employment in the Dairy Farm Equipment Business.

GATLIN, SAMMIE CAROL
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GEORGE WASHINGTON UNIV., ALEXANDRIA, VA. HUMAN RESOURCES RESEARCH OFFICE
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Forecast Systems Analysis and Training Methods for Electronics Maintenance Training.

GEORGIA STATE DEPT. OF EDUCATION, ATLANTA. DIV. OF VOCATIONAL EDUCATION
VT 008 015 ED 027 435 101
Developing a Program of Student Personnel Services for Area Vocational-Technical Schools. Final Report. Volumes I and II.

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VT 007 876 ED 027 420 72
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Report. Legislative Document (1967), No. 4.

GREENLEIGH ASSOCIATES, INC., NEW YORK, N.Y.
VT 005 948 ED 023 839 28
Opening the Doors: Job Training Programs. Part One, Recommendations and Summary Findings.
VT 005 949 ED 025 604 28
Opening the Doors: Job Training Programs. Part Two, Text and Tables.

GRIGGS, MILDRED BARNES
VT 002 721 ED 020 318 112
The Psychomotor Domain--A Selective Bibliography with Annotations.

GROSSMONT UNION HIGH SCHOOL DISTRICT, CALIF.
VT 002 886 ED 016 801 15
Vocational Education Master Plan Report.

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VT 006 519 ED 022 055 104
Project "SIP"--Solving Industrial Problems. Final Report.

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Evaluation of a Series of Conferences to Disseminate Research Results on Vocational Choice.

HALL, J. CURTIS, ED., AND OTHERS
VT 007 500 ED 026 513 69
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HAMEL, HARVEY R.
VT 003 849 MP 000 261 50
Job Tenure of Workers, January 1966.

HARBISON, FREDERICK H., ED.
VT 001 572 ED 021 962 39
Critical Issues in Employment Policy. A Report of The Princeton Manpower Symposium, May 12-13, 1966.

HARKNESS, JAMES P., AND OTHERS
VT 007 627 ED 027 395 64
A Manpower Study of Technical Personnel in Hospital Clinical Laboratories.

HARRIS, E. EDWARD
VT 002 898 ED 017 666 104
Office Education and Distributive Education Teacher-Coordinators--Critical Requirements and Reasoned-Judgment Comparisons, A Brief Summary of a Doctoral Dissertation.

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VT 007 923 ED 027 424 110
Annual National Vocational-Technical Teacher Education Seminar Proceedings.

HERRIN, ANN E.
VT 007 266 ED 025 633 98
Educational and Vocational Goals of Rural and Urban Youth in North Carolina.

HIGH, SIDNEY C., JR.
VT 002 135 ED 020 303 9
Vocational Industrial Education in Newly Developing Nations, A Case Study of the Philippines 1951-1956.

HILTON, MARY N.
VT 003 314 ED 014 568 42
Handbook on Women Workers, 1965.

HOPFENGARDNER, JERROLD D.
VT 000 614 94
Ohio Public Technical Education Notebook, 1967-68.

HORNER, JAMES T.
VT 007 618 ED 024 831 90
Summaries of Studies in Agricultural Education, Central Region, 1967-68.

HOROWITZ, MORRIS A., AND OTHERS
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Manpower Requirements for Planning; An International Comparison Approach. Volume II, Statistical Tables.
VT 005 773 ED 023 838 61
Manpower Requirements for Planning; An International Comparison Approach. Volume I.

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Change in Agriculture Education. Proceedings of the Annual Southern Research Conference in Agricultural Education.

HUMAN SCIENCES RESEARCH, INC., MCLEAN, VA.
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ILLINOIS STATE COMMISSION ON AUTOMATION AND TECHNOLOGICAL PROGRESS, CHICAGO
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ILLINOIS STATE DEPT. OF LABOR, CHICAGO. BUREAU OF EMPLOYMENT SECURITY
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ILLINOIS STATE OFFICE OF THE SUPERINTENDENT OF PUBLIC INSTRUCTION, SPRINGFIELD. DEPT. OF GUIDANCE SERVICES
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A Pilot Project for Vocational Guidance in Economically Underdeveloped Areas.

ILLINOIS UNIV., URBANA
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ILLINOIS UNIV., URBANA. DIV. OF HOME ECONOMICS EDUCATION
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INDIANA EMPLOYMENT SECURITY DIV., INDIANAPOLIS
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VT 003 288 ED 018 624 42
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VT 003 289 ED 018 625 42
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VT 003 290 ED 018 626 42
Jobs for Youth. Part I.

INDIK, BERNARD P.
VT 002 700 ED 020 316 66
The Motivation to Work. Special Supplement to "The Selection of Trainees Under MDTA".

INSTRUMENT SOCIETY OF AMERICA, PITTSBURGH, PA.
VT 002 297 32
The Development and Use of an Instrumentation Technology Curriculum Guide.

INTERDEPARTMENTAL COMMISSION ON STATUS OF WOMEN, WASHINGTON, D.C.
VT 003 505 ED 014 570 76
Report on Progress in 1965 on the Status of Women. Second Annual Report.

INTERNATIONAL ASSOCIATION OF MACHINISTS, WASHINGTON, D.C. RESEARCH DEPT.
VT 000 774 ED 018 548 38
Training for Tomorrow, The IAM Looks Ahead.

INTERNATIONAL INST. FOR LABOUR STUDIES, GENEVA (SWITZERLAND)
VT 004 503 ED 020 329 55
Lectures on the Labour Force and Its Employment Delivered to First Study Course (September 17-December 7, 1962).

INTERNATIONAL LABOUR ORGANIZATION, GENEVA (SWITZERLAND)
VT 002 623 ED 019 459 40
Report on the Inter-Regional Study Tour on Manpower Assessment and Planning in the Union of Soviet Socialist Republics, 8 September-5 October 1963.

INTERNATIONAL MANPOWER INST., WASHINGTON, D.C.
VT 005 211 ED 022 024 23
Symposium on Manpower and the War on Hunger (Washington, D.C., May 3-5, 1967).

IOWA AGRICULTURAL AND HOME ECONOMICS EXPERIMENT STATION, AMES
VT 007 456 ED 024 821 99
Congruency Between Occupational Aspirations and Attainments of Iowa Young People.

IOWA STATE MANPOWER DEVELOPMENT COUNCIL, DES MOINES
VT 002 877 ED 016 796 15
Twelfth Progress Report, March 1, April 30, 1967.

IOWA STATE UNIV. OF SCIENCE AND TECHNOLOGY, AMES
VT 002 676 ED 020 314 40
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VT 007 214 ED 023 907 30
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VT 007 419 ED 025 639 68
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IOWA STATE UNIV. OF SCIENCE AND TECHNOLOGY, AMES. DEPT. OF SOCIOLOGY AND ANTHROPOLOGY
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Relationship of Selected Socio-Demographic Characteristics and Parental Occupational Aspirations for Their Children.

IOWA UNIV., IOWA CITY. CENTER FOR LABOR AND MANAGEMENT
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JEWISH EMPLOYMENT AND VOCATIONAL SERVICE, ST. LOUIS, MO.
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Proceedings of the National Seminar on Vocational Guidance in the Preparation of Counselors, 1967.

KANSAS STATE UNIV., MANHATTAN
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VT 003 700 ED 021 050 19
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VT 003 755 MP 000 224 77
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VT 002 132 ED 019 431 8
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VT 004 358 ED 021 055 22
Training Health Service Workers--The Critical Challenge, Proceedings of the Conference on Job Development and Training for Workers in Health Services, 1966.

LANSING COMMUNITY COLL., MICH. ACCOUNTING AND OFFICE PROGRAMS DEPT.
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VT 007 628 ED 024 839 91
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MANPOWER ADMINISTRATION (DOL), WASHINGTON, D.C. BUREAU OF EMPLOYMENT SECURITY
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MINNESOTA UNIV., MINNEAPOLIS. INDUSTRIAL RELATIONS CENTER
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Nonfarm Agricultural Employment in Northwest Louisiana--Area I--With Implications for Developing Training Programs.
VT 004 784 ED 019 480 59
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VT 004 785 ED 019 481 59
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VT 004 786 ED 019 482 60
Nonfarm Agricultural Employment in Southeast Louisiana--Area IV--With Implications for Developing Training Programs.
VT 004 787 ED 019 483 60
Selected Job Title Descriptions for Nonfarm Agricultural Jobs in Louisiana.

MONTANA OCCUPATIONAL RESEARCH COORDINATING UNIT, HELENA
VT 007 281 63
Paramedical and Allied Health Service Occupations in Montana; A Survey.

MONTANA STATE COLL., BOZEMAN. DEPT. OF AGRICULTURAL EDUCATION
VT 000 190 38
Vocational-Technical Education Needs of Montana Youth and Adults; Panel of Consultants Reports.

MONTANA VOCATIONAL EDUCATION ASSOCIATION, HELENA
VT 000 190 38
Vocational-Technical Education Needs of Montana Youth and Adults; Panel of Consultants Reports.

MONTCLAIR STATE COLL., N.J. DEPT. OF BUSINESS EDUCATION
VT 008 024 ED 028 281 73
Pilot Program Studying Use of Electronic Equipment in the Stenography Classroom.

MOONEY, JOSEPH D., ED.
VT 001 572 ED 021 962 39
Critical Issues in Employment Policy. A Report of The Princeton Manpower Symposium, May 12-13, 1966.

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VT 007 723 ED 026 526 81
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VT 007 550 ED 024 828 100
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MORRISON, RICHARD G.
VT 004 723 ED 020 365 57
Development and Application of Techniques and Procedures for Determining Training Needs and Occupational Opportunities for Students of Vocational Agriculture Within the Baton Rouge Agri-Business Complex.

MORTON, J.E.
VT 007 611 ED 025 661 90
On Manpower Forecasting.

MULLEN, MARGARET J.
VT 007 207 ED 024 809 97
A Volunteer Program in Vocational Information and Career Guidance for Secondary Schools.

MUSGROVE, WILLIAM R.
VT 006 682 ED 025 625 105
Relationship of Occupational Experience, Teaching Experience, Technical Training and College Training to Rated Teaching Effectiveness of Vocational Electronics Teachers.

NANGLE, GRACE L.
VT 005 476 ED 022 036 25
A Conference on New Educational Curricula for Sub-Professional Personnel in Health Services. Interim Report.

NATIONAL ASSOCIATION OF MANUFACTURERS, NEW YORK, N.Y. EDUCATION COMMITTEE
VT 004 301 ED 027 372 84
Focus on Vocational Education. NAM Congress of American Industry, 1967.

NATIONAL ASSOCIATION OF SECONDARY SCHOOL PRINCIPALS, WASHINGTON, D.C. NATIONAL COMMITTEE ON SECONDARY EDUCATION
VT 005 172 ED 028 241 84
Educating for Work. A Report on the Current Scene in Vocational Education.

NATIONAL BUSINESS EDUCATION ASSOCIATION, WASHINGTON, D.C.
VT 007 500 ED 026 513 69
Business Education: An Evaluative Inventory.

NATIONAL COMMISSION ON ACCREDITING, WASHINGTON, D.C.
VT 001 532 ED 026 453 2
Accreditation in Dental Hygiene.

NATIONAL COMMISSION ON TECHNOLOGY, AUTOMATION, AND ECONOMIC PROGRESS, WASHINGTON, D.C.
VT 003 960 ED 023 802 52
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VT 003 961 ED 022 857 52
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VT 003 962 ED 023 803 52
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Applying Technology to Unmet Needs. Technology and the American Economy. Appendix Volume V.
VT 005 795 ED 022 906 61
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VT 005 796 ED 022 907 62
Adjusting to Change. Technology and the American Economy. Appendix Volume III.
VT 005 797 ED 022 908 27
Educational Implications of Technological Change. Technology and the American Economy, Appendix Volume IV.

NATIONAL COMMITTEE FOR CHILDREN AND YOUTH, WASHINGTON, D.C.
VT 006 163 85
Vocational Education at the High School Level.

NATIONAL COMMITTEE FOR SUPPORT OF THE PUBLIC SCHOOLS, WASHINGTON, D.C.
VT 003 613 ED 019 468 18
Financing the Kind of Public Schools New Jersey Needs.
VT 003 773 ED 018 641 19
Education in the States, A Planning Chart Book.

NATIONAL COMMITTEE ON EMPLOYMENT OF YOUTH, NEW YORK, N.Y.
VT 005 226 ED 024 774 113
A Demonstration On-the-Job Training Program for Semi-Professional Personnel in Youth Employment Programs.

NATIONAL EDUCATION ASSOCIATION, WASHINGTON, D.C. DEPT. OF RURAL EDUCATION
VT 005 256 ED 020 413 24
Vocational Education for Rural America. Yearbook, 1958-59.

NATIONAL INST. OF MENTAL HEALTH, (DHEW), BETHESDA, MD. PUBLIC INFORMATION SECTION
VT 001 891 ED 019 414 7
Training Programs of the National Institute of Mental Health.

NATIONAL LEAGUE FOR NURSING, NEW YORK, N.Y.
VT 005 968 ED 026 477 114
Disaster Nursing Preparation. Report of a Pilot Project.

NATIONAL LEAGUE FOR NURSING, NEW YORK, N.Y. DEPT. OF DIPLOMA PROGRAMS
VT 005 954 113
Observations on Students and Educational Methodology.

NATIONAL LEAGUE FOR NURSING, NEW YORK, N.Y. DEPT. OF PRACTICAL NURSING PROGRAMS
VT 003 619 ED 022 852 19
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NATIONAL LEAGUE FOR NURSING, NEW YORK, N.Y. NURSING ADVISORY SERVICE
VT 007 318 ED 027 389 115
Resources for Teaching: Programmed Instruction, Community Problems, Nursing Rounds. Report of a Conference, 1967.

NATIONAL LEAGUE FOR NURSING, NEW YORK, N.Y. RESEARCH AND DEVELOPMENT
VT 007 317 ED 028 252 98
The Nurse Career-Pattern Study; Bibliographic Data Reported by Entering Students, Fall, 1965.
VT 007 806 ED 028 265 108
Nurse-Faculty Census, 1968.

NATIONAL MANPOWER POLICY TASK FORCE, WASHINGTON, D.C.
VT 005 990 ED 025 605 67
Antipoverty Work and Training Efforts: Goals and Reality.

NATIONAL SCIENCE FOUNDATION, WASHINGTON, D.C.
VT 004 707 ED 020 359 56
Scientific and Technical Manpower Resources, Summary Information on Employment, Characteristics, Supply, and Training.

NEAL, MARY V.
VT 005 968 ED 026 477 114
Disaster Nursing Preparation. Report of a Pilot Project.

NEBRASKA RESEARCH AND COORDINATING UNIT, LINCOLN
VT 006 291 ED 021 150 62
State-Wide Computerized Model for Determining Occupational Opportunities in Nebraska.

NEBRASKA STATE DEPT. OF EDUCATION, LINCOLN. DIV. OF VOCATIONAL EDUCATION
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Guidelines for Vocational Education Programs in Nebraska Public Schools.

NEBRASKA UNIV., LINCOLN. COLL. OF AGRICULTURE AND HOME ECONOMICS
VT 007 618 ED 024 831 90
Summaries of Studies in Agricultural Education, Central Region, 1967-68.

NEIGHBORHOOD YOUTH CORPS, WASHINGTON, D.C.
VT 002 294 76
Neighborhood Youth Corps First National Conference Report, 1966.

NELSON, HOWARD F.
VT 007 582 ED 025 658 100
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NELSON, LLOYD P., ED.
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NEW HAMPSHIRE RESEARCH COORDINATING UNIT FOR VOCATIONAL AND TECHNICAL EDUCATION, CONCORD
VT 007 919 92
Progress Report (Nov. 1, 1968-Jan. 31, 1969).

NEW JERSEY STATE DEPT. OF EDUCATION, TRENTON. DIV. OF VOCATIONAL EDUCATION
VT 002 389 ED 027 371 118
Titles for Technology: An Annotated Bibliography. Compiled at the 1967 Summer Institute of Technology for Children (Marlton, N.J.).

NEW MEXICO OCCUPATIONAL RESEARCH AND DEVELOPMENT COORDINATING UNIT, SANTA FE
VT 006 227 85
Philosophy and Objectives for Vocational and Technical Education in New Mexico Now and in the Future.

NEW MEXICO UNIV., ALBUQUERQUE
VT 004 247 MP 000 357 20
Dental Assisting Program, July 1, 1966-June 30, 1967.

NEW YORK STATE EDUCATION DEPT., ALBANY. BUREAU OF OCCUPATIONAL EDUCATION RESEARCH
VT 005 597 66
Comparative Study of High School Graduates from 1-Year, Full Day and 2-Year, Half Day Vocational Programs in Suffolk County, N.Y.

NEW YORK STATE JOINT LEGISLATIVE COMMITTEE ON MIGRANT LABOR, ALBANY
VT 003 312 ED 018 628 76
Report of the Joint Legislative Committee on Migrant Labor.
VT 005 605 ED 022 902 78
Report. Legislative Document (1967), No. 4.

NEW YORK STATE NURSES ASSOCIATION, ALBANY
VT 006 208 ED 022 913 85
Education for Nursing Practice; Report of the New York State Nurses Association 1966 Arden House Conference.

NEW YORK UNIV., N.Y. CENTER FOR FIELD RESEARCH AND SCHOOL SERVICES
VT 007 365 ED 024 813 98
Predictive Testing for Entrance in Vocational-Technical Schools.

NEW YORK UNIV., N.Y. CENTER FOR THE STUDY OF UNEMPLOYED YOUTH
VT 006 504 ED 022 922 79
Workshop on Job Development for Disadvantaged Youth. New York, N.Y. Manpower Training Series.

NILES COMMUNITY SCHOOLS, MICH.
VT 005 517 89
Developing a Program of Occupational Education for All.

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NORTH CAROLINA RESEARCH COORDINATING UNIT IN OCCUPATIONAL EDUCATION, RALEIGH
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NORTH CAROLINA STATE BOARD OF EDUCATION, RALEIGH. DEPT. OF COMMUNITY COLLEGES
VT 006 440 ED 026 486 29
Occupational Education: A Challenge to the Two-Year College.

NORTH CAROLINA STATE UNIV., RALEIGH. SCHOOL OF EDUCATION
VT 006 687 105
A Study of Problems Recognized by Vocational Home Economics Teachers.

NORTH CAROLINA UNIV., CHAPEL HILL. SCHOOL OF DENTISTRY
VT 004 251 MP 000 360 20
Report of Dental Assistants Education and Training Program, Summer 1966.

NORTH CAROLINA UNIV., CHARLOTTE
VT 006 440 ED 026 486 29
Occupational Education: A Challenge to the Two-Year College.

NORTH CAROLINA UNIV., GREENSBORO. DEPT. OF HOME ECONOMICS
VT 006 687 105
A Study of Problems Recognized by Vocational Home Economics Teachers.

NORTH CAROLINA UNIV., GREENSBORO. SCHOOL OF HOME ECONOMICS
VT 007 266 ED 025 633 98
Educational and Vocational Goals of Rural and Urban Youth in North Carolina.

NORTH DAKOTA UNIV., GRAND FORKS
VT 006 999 ED 022 964 79
The Effects of Integration on Rural Indian Pupils. Final Report.

NORTHEASTERN UNIV., BOSTON, MASS. DEPT. OF ECONOMICS
VT 005 772 ED 022 904 61
Manpower Requirements for Planning; An International Comparison Approach. Volume II, Statistical Tables.
VT 005 773 ED 023 838 61
Manpower Requirements for Planning; An International Comparison Approach. Volume I.

NORTHERN ILLINOIS UNIV., DE KALB. VOCATIONAL OFFICE AND DISTRIBUTIVE EDUCATION MATERIALS CENTER
VT 002 898 ED 017 666 104
Office Education and Distributive Education Teacher-Coordinators--Critical Requirements and Reasoned-Judgment Comparisons, A Brief Summary of a Doctoral Dissertation.

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NORTHERN MICHIGAN UNIV., MARQUETTE
VT 004 322 MP 000 378 53
Manpower Problems and Economic Opportunities in an Adjusting Regional Economy, The Upper Peninsula of Michigan. Summary Report.
VT 004 323 MP 000 379 54
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NORTHRUP, HERBERT R., ED.
VT 007 240 63
The Negro and Employment Opportunity. Problems and Practices.

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VT 003 613 ED 019 468 18
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VT 006 338 ED 025 615 86
A Sociological Analysis of Vocational Education in the United States.

OAK RIDGE ASSOCIATED UNIVERSITIES, TENN.
VT 007 752 ED 025 678 108
The Training and Technology Project Experimental Research Program for Vocational-Technical Teachers.

OAK RIDGE INST. OF NUCLEAR STUDIES, TENN.
VT 002 916 ED 017 672 16
Resources for Southern Manpower Development.

OFFICE OF ECONOMIC OPPORTUNITY, WASHINGTON, D.C.
VT 006 564 ED 027 381 79
Working With Organizations to Develop "New Careers" Programs.

OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
VT 001 797 ED 019 402 5
The Vocational Education Act of 1963.
VT 002 132 ED 019 431 8
Organization and Effective Use of Advisory Committees.
VT 002 417 ED 019 446 12
A Review of Activities in Federally Aided Programs, Vocational and Technical Education, Fiscal Year 1964.
VT 004 956 23
The Development of Education in Nepal.
VT 006 282 96
Vocational Agriculture and the FFA.
VT 008 015 ED 027 435 101
Developing a Program of Student Personnel Services for Area Vocational-Technical Schools. Final Report. Volumes I and II.

OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C. BUREAU OF ADULT AND VOCATIONAL EDUCATION
VT 004 916 ED 022 021 22
Summary Report of Vocational-Technical Program Development by States.

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OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C. DIV. OF MANPOWER DEVELOPMENT AND TRAINING
VT 001 822 ED 019 408 6
The Manpower Development and Training Act, Programs and Procedures.
VT 004 124 ED 021 983 52
An Overview of Manpower Development and Training Under Redevelopment Area Residents Program, 1963-1966.

OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C. DIV. OF VOCATIONAL AND TECHNICAL EDUCATION
VT 001 819 ED 019 406 5
Regional Conference Summaries, 1966.
VT 002 340 ED 019 439 11
State Reports of Vocational-Technical Program Development, Fiscal Year 1966.
VT 002 920 ED 017 674 16
Report of National Advisory Committee on Health Occupations Education, March 10-11, 1966.
VT 004 350 21
Suggested Guidelines for Developing a Training Program for the Nursing Unit Management Assistant (Ward Clerk).

OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C. TECHNICAL EDUCATION BRANCH
VT 005 178 ED 020 408 23
Area Vocational Schools, A Summary of State Developments.

OFFICE OF MANPOWER, AUTOMATION AND TRAINING (DOL), WASHINGTON, D.C.
VT 003 782 ED 018 642 47
Unemployment and Retraining, An Annotated Bibliography of Research.
VT 003 893 ED 020 322 51
Mobility and Worker Adaptation to Economic Change in the United States.
VT 004 570 ED 022 008 56
Manpower and Automation Research Sponsored by the Office of Manpower, Automation and Training, July 1, 1962-June 30, 1963.
VT 004 572 ED 022 009 58
Manpower and Automation Research Sponsored by the Office of Manpower, Automation and Training, July 1, 1963-June 30, 1964.
VT 005 229 ED 022 027 88
Manpower and Automation Research Sponsored by the Office of Manpower, Automation and Training Through June 30, 1965.

OFFICE OF MANPOWER POLICY, EVALUATION AND RESEARCH (DOL), WASHINGTON, D.C.
VT 002 692 ED 020 315 40
Technology and Manpower in Design and Drafting 1965-75.
VT 004 342 ED 022 866 21
Federally-Assisted Manpower Development Programs; A Planning Staff Study.
VT 005 728 ED 025 601 78
Training Needs in Correctional Institutions.
VT 006 228 ED 022 049 89
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OHIO STATE DEPT. OF EDUCATION, COLUMBUS. AGRICULTURAL EDUCATION SERVICE
VT 001 949 ED 019 422 7
Agri-Business and Services, Report of the Workshop, Program Planning. 1966.

OHIO STATE DEPT. OF EDUCATION, COLUMBUS. DIV. OF GUIDANCE AND TESTING
VT 000 614 94
Ohio Public Technical Education Notebook, 1967-68.
VT 007 239 ED 024 810 97
Sources of Occupational Information.

OHIO STATE UNIV., COLUMBUS. CENTER FOR VOCATIONAL AND TECHNICAL EDUCATION
VT 005 628 ED 021 069 26
National Program Development Institutes in Technical Education, Summer 1967, A Compilation of Selected Presentations and Instructional Materials.
VT 005 631 ED 021 070 95
Worker Adjustment--Youth in Transition from School to Work, An Annotated Bibliography of Recent Literature. Bibliography 2.
VT 005 935 ED 021 140 113
A Taxonomy of Office Activities for Business and Office Education.
VT 006 912 ED 022 955 29
National Program Development Institutes in Technical Education.
VT 007 475 ED 024 824 90
The Center for Research and Leadership Development in Vocational and Technical Education. Progress Report. (April 16-July 15, 1968).
VT 007 624 ED 024 837 107
Changing Undergraduate Business Teacher Education Programs to Prepare Teachers for Culturally Different Youth.
VT 007 825 ED 026 537 72
A Guide to Systematic Planning for Vocational and Technical Schools.
VT 007 876 ED 027 420 72
A Guide for Planning Facilities for Occupational Preparation Programs in Metallurgy Technology. Research 28.
VT 007 923 ED 027 424 110
Annual National Vocational-Technical Teacher Education Seminar Proceedings.
VT 007 989 ED 028 278 72
A Guide for Planning Facilities for Occupational Preparation Programs in Electrical Technology. Research 30.
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OHIO STATE UNIV., COLUMBUS. DEPT. OF AGRICULTURAL EDUCATION
VT 001 949 ED 019 422 7
Agri-Business and Services, Report of the Workshop, Program Planning. 1966.
VT 007 902 ED 028 272 110
Supply and Demand for Teachers of Vocational Agriculture in the United States for the 1967-68 School Year.

OHIO STATE UNIV., COLUMBUS. NATIONAL CENTER FOR RESEARCH IN AGRICULTURAL EDUCATION
VT 002 123 ED 021 964 8
Report of a National Seminar on Agricultural Education, "A Design for the Future".

OKLAHOMA STATE BOARD FOR VOCATIONAL EDUCATION, STILLWATER. DIV. OF TECHNICAL EDUCATION
VT 007 875 ED 027 419 109
Summer Institute to Train Data Processing Teachers for the New Oklahoma State-Wide Computer Science System, Phase II. Final Report.

OKLAHOMA STATE DEPT. OF EDUCATION, OKLAHOMA CITY. DEPT. OF VOCATIONAL TECHNICAL EDUCATION
VT 007 781 ED 026 532 101
A Guide for Developmental Vocational Guidance. Grades K-12.

OKLAHOMA STATE UNIV., STILLWATER. DEPT. OF AGRICULTURAL EDUCATION
VT 006 725 34
The Training Needed for Selected Farm Related Occupations in Four Counties in Oklahoma.
VT 007 724 ED 025 677 91
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VT 007 724 ED 025 677 91
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VT 006 920 ED 022 960 97
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ORGANISATION FOR ECONOMIC COOPERATION AND DEVELOPMENT, PARIS (FRANCE)
VT 004 509 ED 017 709 55
Manpower Policy and Programmes in the United States.

ORGANISATION FOR ECONOMIC COOPERATION AND DEVELOPMENT, PARIS (FRANCE). SOCIAL AFFAIRS DIV.
VT 001 521 ED 024 756 2
International Trade Union Seminar on Active Manpower Policy, 1963.
VT 004 510 ED 022 003 55
International Joint Seminar on Geographical and Occupational Mobility of Manpower (Castelfusano, November 19-22, 1963).

ORZECH, DAVID, ED.
VT 000 458 ED 022 838 2
Joint Programs in Vocational Rehabilitation; Proceedings of a Regional Institute, 1964.

O'TOOLE, THOMAS J.
VT 003 649 ED 015 275 44
Studies in Workmen's Compensation and Radiation Injury, Volume II.

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VT 008 015 ED 027 435 101
Developing a Program of Student Personnel Services for Area Vocational-Technical Schools. Final Report. Volumes I and II.

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PENITENTIARY, LEAVENWORTH, KANS.
VT 005 830 ED 027 376 28
Vocational Training Offered by State and Federal Correctional Institutions. Directory.

PENNSYLVANIA STATE BOARD FOR VOCATIONAL EDUCATION, HARRISBURG
VT 003 584 ED 018 634 18
The Administration and Financing of Vocational-Technical Education in Pennsylvania.

PENNSYLVANIA STATE UNIV., UNIVERSITY PARK. AGRICULTURAL EXPERIMENT STATION
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PENNSYLVANIA STATE UNIV., UNIVERSITY PARK. DEPT. OF VOCATIONAL EDUCATION
VT 007 817 ED 026 536 70
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VT 003 862 ED 014 609 51
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VT 004 357 ED 021 994 21
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PUBLIC HEALTH SERVICE (DHEW), WASHINGTON, D.C. DIV. OF DENTAL HEALTH
VT 005 646 95
The Trained Dental Assistant, Facts for Counselors.

PUBLIC HEALTH SERVICE (DHEW), WASHINGTON, D.C. NATIONAL CENTER FOR HEALTH STATISTICS
VT 003 221 ED 018 614 41
Health Resources Statistics, Health Manpower, 1965.

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VT 007 582 ED 025 658 100
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VT 007 461 ED 027 392 106
Cooperative Education Program for Prospective Vocational-Technical Education Teachers (COPE). First Annual Report.
VT 008 100 ED 027 438 35
A Study of Curriculums for Occupational Preparation and Education. (SCOPE Program: Phase I). Progress Reports I and II.
VT 008 102 ED 027 440 35
Structural Analysis as an Aid to Curriculum Development. Incidental Report No. 1.

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VT 008 188 ED 029 125 36
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VT 003 857 ED 015 295 50
The Current Employment Market for Engineers, Scientists, and Technicians.

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The Role of Technical Schools in Improving the Skills and Earning Capacity of Rural Manpower, A Case Study.

SAINT PHILIP'S COLL., SAN ANTONIO, TEX.
VT 007 904 ED 028 274 82
Research and Demonstration for Nurse's Aide Training.

SAN FRANCISCO STATE COLL., CALIF.
VT 000 458 ED 022 838 2
Joint Programs in Vocational Rehabilitation; Proceedings of a Regional Institute, 1964.

SAN FRANCISCO STATE COLLEGE, CALIF. CENTER FOR TECHNOLOGICAL EDUCATION
VT 005 423 ED 022 897 32
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VT 003 840 ED 014 603 49
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VT 007 486 ED 025 649 99
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SARGENT, WILLIAM T., ED.
VT 002 091 ED 024 758 66
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VT 004 420 ED 020 327 55
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VT 002 190 ED 020 306 10
Experimental and Demonstration Manpower Project for Training and Placement of Youthful Inmates of Draper Correctional Center at Elmore, Alabama. Eighth Progress Report.
VT 002 192 ED 020 308 10
Experimental and Demonstration Manpower Project for Training and Placement of Youthful Inmates of Draper Correctional Center at Elmore, Alabama. Fifth Progress Report.
VT 005 718 ED 020 437 26
Experimental and Demonstration Manpower Project for Training and Placement of Youthful Inmates of Draper Correctional Center at Elmore, Alabama. Third Progress Report.
VT 005 719 ED 020 438 27
Experimental and Demonstration Manpower Project for Training and Placement of Youthful Inmates of Draper Correctional Center at Elmore, Alabama. Fourth Progress Report.

SEQUOIA UNION HIGH SCHOOL DISTRICT, REDWOOD CITY, CALIF.
VT 007 207 ED 024 809 97
A Volunteer Program in Vocational Information and Career Guidance for Secondary Schools.

SHEPPARD, HAROLD L.
VT 007 885 ED 028 270 82
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SHIAWASSEE-CLINTON AREA VOCATIONAL-TECHNICAL STUDY COMMITTEE, MICH.
VT 001 718 ED 018 606 4
Citizens' Survey of Shiawassee-Clinton County, Vocational-Technical Feasibility Study.

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VT 006 571 ED 022 923 96
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VT 007 621 ED 024 834 91
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VT 007 530 ED 024 827 100
Educational and Occupational Aspirations and Expectations of High School Juniors and Seniors in the State of Washington. Interim Report, No. 14.

SOUTH CAROLINA GENERAL ASSEMBLY, COLUMBIA
VT 001 688 3
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SOUTHERN ILLINOIS UNIV., EDWARDSVILLE
VT 007 723 ED 026 526 81
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VT 006 564 ED 027 381 79
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VT 007 266 ED 025 633 98
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VT 007 389 ED 025 638 68
An Instrument to Evaluate Manpower Development Training Act Institutional Training Projects in Arizona.

STANFORD UNIV., CALIF. SCHOOL OF EDUCATION
VT 002 135 ED 020 303 9
Vocational Industrial Education in Newly Developing Nations, A Case Study of the Philippines 1951-1956.
VT 003 229 ED 021 972 17
Flexibility for Vocational Education Through Computer Scheduling.

STATE UNIV. OF NEW YORK, ALBANY. BUREAU OF OCCUPATIONAL EDUCATION RESEARCH
VT 007 626 ED 024 838 100
A Demonstration System of Occupational Information for Career Guidance.

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STATE UNIV. OF NEW YORK, ITHACA. AGRICULTURAL EDUCATION DIV. AT CORNELL UNIV.
VT 005 152 ED 020 404 23
Bibliography of Summer Programs in Agricultural Education.

STATE UNIV. OF NEW YORK, OSWEGO. COLL. AT OSWEGO
VT 006 651 86
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VT 006 652 86
Technology and the Structure of Knowledge.
VT 006 653 33
Technology and the Curriculum. Dimensions for Exploration.

STATE UNIV. OF NEW YORK, OSWEGO. COLL. OF EDUCATION
VT 004 121 20
Organization, Administration and Supervision of Vocational Education and Practical Arts Program.

STEPHENS, JOHN F.
VT 002 727 ED 021 041 14
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STEPHENSON, DON RAY
VT 001 897 94
S.A.V.E.S. - Selection Approaches for Vocational Education Students.

STEVENS, DAN
VT 005 517 89
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STEVENSON, WILLIAM W., ED.
VT 007 724 ED 025 677 91
Change in Agriculture Education. Proceedings of the Annual Southern Research Conference in Agricultural Education.

STRINER, HERBERT E.
VT 007 885 ED 028 270 82
Civil Rights, Employment, and the Social Status of American Negroes.

SUGG, MATILDA R.
VT 004 521 ED 022 006 56
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VT 004 745 ED 020 379 58
Conducting a Labor Force Survey in Developing Countries.

SUKRASEP, KANCHANA
VT 005 186 32
Changes, Modernization, New Courses, and Developments in Agricultural Education in California High School-1965.

SULLIVAN, WILLIAM
VT 004 319 ED 015 329 20
The Role of Technical Schools in Improving the Skills and Earning Capacity of Rural Manpower, A Case Study.

SULTAN, PAUL
VT 004 625 ED 020 355 56
The Skill Impact of Automation.

SWANSON, GORDON I.
VT 005 256 ED 020 413 24
Vocational Education for Rural America. Yearbook, 1958-59.

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SWANSON, J. CHESTER, AND OTHERS
VT 002 553 ED 019 455 13
A Gateway to Higher Economic Levels, Vocational-Technical Education to Serve Missouri.

SWANSON, ROBERT
VT 006 651 86
Innovation and the Three Fallacies.

SWANSTROM, THOMAS E.
VT 003 843 MP 000 255 50
Work Experience of the Population in 1965.

SWERDLOFF, SOL
VT 002 880 ED 026 457 88
Methods of Long-Term Projection of Requirements for and Supply of Qualified Manpower.

TARRIER, RANDOLPH, ED.
VT 007 239 ED 024 810 97
Sources of Occupational Information.

TAYLOR, JAMES L.
VT 007 612 ED 026 522 72
Planning and Designing Functional Facilities for Industrial Arts Education.

TAYLOR, ROBERT E.
VT 007 475 ED 024 824 90
The Center for Research and Leadership Development in Vocational and Technical Education. Progress Report. (April 16-July 15, 1968).

TEMPLE UNIV., PHILADELPHIA. DEPT. OF BUSINESS EDUCATION
VT 007 624 ED 024 837 107
Changing Undergraduate Business Teacher Education Programs to Prepare Teachers for Culturally Different Youth.

TENNESSEE UNIV., KNOXVILLE
VT 007 752 ED 025 678 108
The Training and Technology Project Experimental Research Program for Vocational-Technical Teachers.

TENNYSON, W. WESLEY
VT 006 746 ED 027 383 106
Pilot Training Project for Teachers of Distribution and Marketing, Focusing on Responsibilities for Career Development.

TEXAS A AND M UNIVERSITY, COLLEGE STATION. DEPT. OF AGRICULTURAL EDUCATION
VT 007 965 64
Opportunities and Requirements for Entry into the Agricultural Machinery Mechanics Trade. Summary.
VT 007 966 ED 027 430 64
Opportunities and Requirements for Entry into the Agricultural Machinery Mechanics Trade.

TEXAS EDUCATION AGENCY, AUSTIN. DEPT. OF VOCATIONAL EDUCATION
VT 007 684 ED 027 398 108
Report of Second Annual Workshop for Coordinated Vocational-Academic Education (Brownwood, Texas, July 29-August 1968). Units One-Seven.

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THOMAS, ROBERT W.
VT 007 214 ED 023 907 30
Research and Development in Vocational and Technical Education: Non-Metropolitan Areas.

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VT 002 586 13
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TORRENCE, JOHN THOMAS
VT 005 287 ED 025 598 24
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TORRENCE, JOHN THOMAS, COMP.
VT 005 830 ED 027 376 28
Vocational Training Offered by State and Federal Correctional Institutions. Directory.

TRAVIS, HERMAN
VT 003 893 ED 020 322 51
Mobility and Worker Adaptation to Economic Change in the United States.

TRENTON STATE COLL., N.J. DEPT. OF BUSINESS EDUCATION
VT 008 024 ED 028 281 73
Pilot Program Studying Use of Electronic Equipment in the Stenography Classroom.

TUCKMAN, BRUCE W.
VT 008 100 ED 027 438 35
A Study of Curriculums for Occupational Preparation and Education. (SCOPE Program: Phase I). Progress Reports I and II.
VT 008 102 ED 027 440 35
Structural Analysis as an Aid to Curriculum Development. Incidental Report No. 1.
VT 008 188 ED 029 125 36
Analysis, Classification and Integration of Educational Objectives.

TUSKEGEE INST., ALA.
VT 001 722 ED 015 250 94
Enhancing the Occupational Outlook and Vocational Aspirations of Southern Secondary Youth, A Conference of Secondary School Principals and Counselors.
VT 007 503 ED 028 257 80
Experimental and Demonstration Project for Rural Workers at Tuskegee Institute (1966-1967).
VT 007 504 ED 027 393 69
Performance Related to Indicators of Potential of Tuskegee Institute MDTA Trainees.

TUTTLE, FRANCIS
VT 007 875 ED 027 419 109
Summer Institute to Train Data Processing Teachers for the New Oklahoma State-Wide Computer Science System, Phase II. Final Report.

UNION CARBIDE CORP., OAK RIDGE, TENN. NUCLEAR DIV.
VT 001 835 ED 019 410 39
Development of a Performance Specimen Check List for Machining Personnel.

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VT 007 752 ED 025 678 108
The Training and Technology Project Experimental Research Program for Vocational-Technical Teachers.

UNITED NATIONS EDUCATIONAL, SCIENTIFIC, AND CULTURAL ORGANIZATION, PARIS (FRANCE)
VT 002 880 ED 026 457 88
Methods of Long-Term Projection of Requirements for and Supply of Qualified Manpower.

UPJOHN (W.E.) INST. FOR EMPLOYMENT RESEARCH, KALAMAZOO, MICH.
VT 007 611 ED 025 661 90
On Manpower Forecasting.

UTAH RESEARCH COORDINATING UNIT FOR VOCATIONAL AND TECHNICAL EDUCATION, SALT LAKE CITY
VT 002 727 ED 021 041 14
Analysis of Questionnaire Completed by Utah Vocational Directors.
VT 005 551 ED 021 068 95
V.I.E.W., Vocational Information for Education and Work.
VT 006 519 ED 022 055 104
Project "SIP"--Solving Industrial Problems. Final Report.
VT 007 550 ED 024 828 100
Extension of Pilot Program to Increase the Number of Vocational and Technical Education Scholarships.

UTAH STATE DEPT. OF EMPLOYMENT SECURITY, SALT LAKE CITY
VT 005 551 ED 021 068 95
V.I.E.W., Vocational Information for Education and Work.

VAIRO, PHILIP D., ED.
VT 006 440 ED 026 486 29
Occupational Education: A Challenge to the Two-Year College.

VALENTINE, I.E.
VT 005 628 ED 021 069 26
National Program Development Institutes in Technical Education, Summer 1967, A Compilation of Selected Presentations and Instructional Materials.

VAN DERVEER, ELIZABETH T.
VT 008 024 ED 028 281 73
Pilot Program Studying Use of Electronic Equipment in the Stenography Classroom.

VAUGHN, ALVIN, ED.
VT 007 624 ED 024 837 107
Changing Undergraduate Business Teacher Education Programs to Prepare Teachers for Culturally Different Youth.

VENEMA, WILLIAM H.
VT 006 920 ED 022 960 97
Development of a Projective Technique for Obtaining Educationally Useful Information Indicating Pupils' Attitudes Toward Work and Occupational Plans. Report No. 21. Final Report.

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VIRGINIA STATE DEPT. OF EDUCATION, RICHMOND. SPECIAL EDUCATION SERVICE
VT 004 556 ED 027 373 78
Guidelines for Establishing School-Work Study Programs for Educable Mentally Retarded Youth.

VOESTING, DEAN R.
VT 007 456 ED 024 821 99
Congruency Between Occupational Aspirations and Attainments of Iowa Young People.

VOTH, THEODORE H.
VT 005 585 33
Expectations of Oklahoma Firms Concerning Occupational Curricula for State Junior Colleges.

WARREN, RICHARD
VT 005 517 89
Developing a Program of Occupational Education for All.

WASHINGTON STATE COORDINATING COUNCIL FOR OCCUPATIONAL EDUCATION, OLYMPIA
VT 006 919 ED 022 959 97
Development of an Experimental Forced-Choice Occupational Preference Inventory. Report No. 23. Final Report.

WASHINGTON STATE UNIV., PULLMAN
VT 007 530 ED 024 827 100
Educational and Occupational Aspirations and Expectations of High School Juniors and Seniors in the State of Washington. Interim Report, No. 14.

WASHINGTON STATE UNIV., PULLMAN. DEPT. OF EDUCATION
VT 006 919 ED 022 959 97
Development of an Experimental Forced-Choice Occupational Preference Inventory. Report No. 23. Final Report.
VT 006 920 ED 022 960 97
Development of a Projective Technique for Obtaining Educationally Useful Information Indicating Pupils' Attitudes Toward Work and Occupational Plans. Report No. 21. Final Report.

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VT 007 965 64
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VT 007 966 ED 027 430 64
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Electronic Technician Personnel and Training Needs of Iowa Industries.

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VT 005 728 ED 025 601 78
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WISCONSIN DEPARTMENTAL RESEARCH CENTER FOR VOCATIONAL EDUCATION, MADISON
VT 007 873 ED 026 540 92
National Survey of Indexing and Retrieval Procedures in Vocational-Technical Education Research Coordinating Units.

WISCONSIN STATE BOARD OF VOCATIONAL AND ADULT EDUCATION, MADISON
VT 001 702 4
Plan for Area Development of Vocational and Technical Education in Wisconsin.

WISCONSIN STATE BOARD OF VOCATIONAL, TECHNICAL AND ADULT EDUCATION, MADISON
VT 007 544 ED 025 653 30
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WISCONSIN STATE DEPT. OF PUBLIC INSTRUCTION, MADISON
VT 007 589 ED 025 659 70
A Manual to be Used in the Evaluation of Thirty-Four Comprehensive High Schools in Wisconsin Which Participated in a Three-Year Pilot Program of High School Vocational Education.

WISCONSIN STATE DEPT. OF PUBLIC INSTRUCTION, MADISON. DIV. OF INSTRUCTIONAL SERVICES
VT 007 544 ED 025 653 30
Three-Year Pilot Program in High School Vocational Education. Findings, Conclusions and Recommendations.

WISCONSIN STATE EMPLOYMENT SERVICE, MADISON
VT 001 086 ED 020 300 38
A Study of Health and Related Service Occupations in Wisconsin.

WISCONSIN UNIV., MADISON. CENTER FOR STUDIES IN VOCATIONAL AND TECHNICAL EDUCATION
VT 005 423 ED 022 897 32
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WISCONSIN UNIV., MADISON. COLL. OF AGRICULTURAL AND LIFE SCIENCES
VT 008 074 ED 028 286 102
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VT 001 949 ED 019 422 7
Agri-Business and Services, Report of the Workshop, Program Planning. 1966.

WOLFF, MICHAEL F.
VT 006 653 33
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WOMEN'S BUREAU (DOL), WASHINGTON, D.C.
VT 003 314 ED 014 568 42
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VT 003 754 MP 000 223 47
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VT 003 757 MP 000 226 77
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VT 003 758 ED 014 591 77
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VT 004 950 22
Educational Statistics for Nepal.
VT 004 956 23
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WOODIN, RALPH J.
VT 007 902 ED 028 272 110
Supply and Demand for Teachers of Vocational Agriculture in the United States for the 1967-68 School Year.

WOODWARD AND FONDILLER, INC., NEW YORK, N.Y.
VT 003 650 ED 015 276 44
Studies in Workmen's Compensation and Radiation Injury, Volume III.

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VT 001 718 ED 018 606 4
Citizens' Survey of Shiawassee-Clinton County, Vocational-Technical Feasibility Study.

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Economic Education in the High School, Report of a Business Education Advisory Committee on Economic Education.
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VT 005 935 ED 021 140 113
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A Four State Survey of Business Education Programs.
VT 007 286 ED 027 387 115
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VT 007 432 ED 028 255 106
Involvement. Inservice Business Teacher Programs Leading to a Better Understanding of Students with Special Needs.
VT 007 500 ED 026 513 69
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VT 007 624 ED 024 837 107
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VT 008 024 ED 028 281 73
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Distributive Education--A Guide to Practical Research.
VT 002 898 ED 017 666 104
Office Education and Distributive Education Teacher-Coordinators--Critical Requirements and Reasoned-Judgment Comparisons,
A Brief Summary of a Doctoral Dissertation.
VT 006 746 ED 027 383 106
Pilot Training Project for Teachers of Distribution and Marketing, Focusing on Responsibilities for Career Development.

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VT 002 920 ED 017 674 16
Report of National Advisory Committee on Health Occupations Education, March 10-11, 1966.

VT 003 221 ED 018 614 41
Health Resources Statistics, Health Manpower, 1965.

VT 003 619 ED 022 852 19
Practical Nursing Education Today. Report of the 1965 Survey of 722 Practical Nursing Programs.

VT 003 684 ED 016 085 45
Manpower for California Hospitals, 1964-1975.

VT 004 179 MP 000 342 53
Report of First Year of Operation, Oklahoma Health Manpower Intelligence Project.

VT 004 247 MP 000 357 20
Dental Assisting Program, July 1, 1966-June 30, 1967.

VT 004 251 MP 000 360 20
Report of Dental Assistants Education and Training Program, Summer 1966.

VT 004 350 21
Suggested Guidelines for Developing a Training Program for the Nursing Unit Management Assistant (Ward Clerk).

VT 004 357 ED 021 994 21
Toward Quality in Nursing, Needs and Goals, Report of the Surgeon General's Consultant Group on Nursing.

VT 004 358 ED 021 055 22
Training Health Service Workers--The Critical Challenge, Proceedings of the Conference on Job Development and Training for Workers in Health Services, 1966.

VT 004 556 ED 027 373 78
Guidelines for Establishing School-Work Study Programs for Educable Mentally Retarded Youth.

VT 004 790 ED 020 383 60
Health Manpower 1966-75, A Study of Requirements and Supply.

VT 005 426 ED 020 420 88
Health Manpower Research. Volume I.

VT 005 427 ED 022 898 89
Health Manpower Research. Volume 2.

VT 005 476 ED 022 036 25
A Conference on New Educational Curricula for Sub-Professional Personnel in Health Services. Interim Report.

VT 005 568 ED 028 242 26
Health Services Mobility Study, Plan of Work.

VT 005 646 95
The Trained Dental Assistant, Facts for Counselors.

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Observations on Students and Educational Methodology.

VT 005 968 ED 026 477 114
Disaster Nursing Preparation. Report of a Pilot Project.

VT 006 208 ED 022 913 85
Education for Nursing Practice; Report of the New York State Nurses Association 1966 Arden House Conference.

VT 006 863 ED 027 384 115
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VT 007 317 ED 028 252 98
The Nurse Career-Pattern Study; Bibliographic Data Reported by Entering Students, Fall, 1965.

VT 007 318 ED 027 389 115
Resources for Teaching: Programmed Instruction, Community Problems, Nursing Rounds. Report of a Conference, 1967.

VT 007 627 ED 027 395 64
A Manpower Study of Technical Personnel in Hospital Clinical Laboratories.

VT 007 652 ED 025 670 107
Summer Teacher Training Institute in Dental Assisting, 1967.

VT 007 806 ED 028 265 108
Nurse-Faculty Census, 1968.

VT 007 904 ED 028 274 82
Research and Demonstration for Nurse's Aide Training.

VT 008 055 ED 028 283 73
A Guide for Planning Facilities for Occupational Preparation Programs for Medical X-Ray Technicians. Research 31.

HOME ECONOMICS EDUCATION

VT 004 817 ED 021 058 88
Home Economics Education. Home Economics Research Abstracts--1966, No. 5.

VT 006 412 ED 024 796 67
Listing of Evaluative and Other Types of Instruments.

VT 006 687 105
A Study of Problems Recognized by Vocational Home Economics Teachers.

VT 007 262 ED 026 502 90
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INDUSTRIAL ARTS EDUCATION

VT 002 091 ED 024 758 66
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VT 002 389 ED 027 371 118
Titles for Technology: An Annotated Bibliography. Compiled at the 1967 Summer Institute of Technology for Children (Marlton, N.J.).

VT 005 283 32
A Suggested Guide for Industrial Arts Education.

VT 005 740 84
Technology, An Intellectual Discipline.

VT 006 651 86
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VT 006 652 86
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VT 006 653 33
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VT 006 655 ED 027 382 104
Anecdotal Abstracts from an Environment for Learning.

VT 006 669 ED 026 490 114
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VT 006 671 114
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VT 006 673 ED 025 621 34
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VT 006 677 ED 025 623 105
An Appraisal of the 1967 NDEA Institutes for Advanced Study in Industrial Arts and Their Impact Upon Professional Activities of Participants and Directors.

VT 006 679 ED 025 624 114
An Experimental Comparison of Direct-Detailed Versus Directed Discovery Laboratory Exercises in Teaching Selected Elements of Basic Electricity.

VT 007 612 ED 026 522 72
Planning and Designing Functional Facilities for Industrial Arts Education.

VT 007 767 ED 027 407 115
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MANPOWER ECONOMICS

VT 000 774 ED 018 548 38
Training for Tomorrow, The IAM Looks Ahead.

VT 001 521 ED 024 756 2
International Trade Union Seminar on Active Manpower Policy, 1963.

VT 001 572 ED 021 962 39
Critical Issues in Employment Policy. A Report of The Princeton Manpower Symposium, May 12-13, 1966.

VT 002 505 ED 026 456 39
Economic Policies and Practices. Programs for Relocating Workers Used by Governments of Selected Countries.

VT 002 623 ED 019 459 40
Report on the Inter-Regional Study Tour on Manpower Assessment and Planning in the Union of Soviet Socialist Republics, 8 September-5 October, 1963.

VT 002 768 ED 013 935 14
Report of Work Injuries to Minors Under 18 Years of Age, A Study of 18 Months' Experience Reported by 28 States 1964-65.

VT 002 880 ED 026 457 88
Methods of Long-Term Projection of Requirements for and Supply of Qualified Manpower.

VT 002 916 ED 017 672 16
Resources for Southern Manpower Development.

VT 003 312 ED 018 628 76
Report of the Joint Legislative Committee on Migrant Labor.

VT 003 314 ED 014 568 42
Handbook on Women Workers, 1965.

VT 003 409 ED 021 974 43
Iowa Employment Patterns and Projections, 1940-1970, Industrial, Occupational, Occupational-Industry Employment Matrix.

VT 003 496 ED 015 269 43
Occupational Outlook Handbook, Employment Information on Occupations for Use in Guidance, 1966-67.

VT 003 505 ED 014 570 76
Report on Progress in 1965 on the Status of Women. Second Annual Report.

VT 003 648 ED 015 274 44
Studies in Workmen's Compensation and Radiation Injury, Volume I.

VT 003 649 ED 015 275 44
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Job Tenure of Workers, January 1966.

VT 003 875 MP 000 284 51
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VT 003 876 MP 000 285 51
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VT 003 893 ED 020 322 51
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VT 003 960 ED 023 802 52
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VT 003 961 ED 022 857 52
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Manpower Problems and Economic Opportunities in an Adjusting Regional Economy, The Upper Peninsula of Michigan.

VT 004 359 ED 021 995 54
Automation, the Impact of Technological Change.

VT 004 375 ED 021 998 54
Labor Mobility, Selected References.

VT 004 503 ED 020 329 55
Lectures on the Labour Force and Its Employment Delivered to First Study Course (September 17-December 7, 1962).

VT 004 509 ED 017 709 55
Manpower Policy and Programmes in the United States.

VT 004 510 ED 022 003 55
International Joint Seminar on Geographical and Occupational Mobility of Manpower (Castelfusano, November 19-22, 1963).

VT 004 521 ED 022 006 56
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VT 004 570 ED 022 008 56
Manpower and Automation Research Sponsored by the Office of Manpower, Automation and Training, July 1, 1962-June 30, 1963.

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VT 004 625 ED 020 355 56
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Scientific and Technical Manpower Resources, Summary Information on Employment, Characteristics, Supply, and Training.

VT 004 718 ED 020 361 57
The Hired Farm Working Force of 1966, a Statistical Report.

VT 004 745 ED 020 379 58
Conducting a Labor Force Survey in Developing Countries.

VT 004 819 ED 020 384 60
History of Employment and Manpower Policy in the United States. Parts I and II.

VT 004 820 ED 020 385 61
History of Employment and Manpower Policy in the United States. Parts III and IV.

VT 005 229 ED 022 027 88
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VT 005 478 ED 026 476 25
Manpower in Economic and Social Growth; Proceedings of International Manpower Seminar, 1966.

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VT 006 338 ED 025 615 86
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VT 007 611 ED 025 661 90
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VT 007 885 ED 028 270 82
Civil Rights, Employment, and the Social Status of American Negroes.

VT 008 189 ED 028 299 82
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OCCUPATIONAL PSYCHOLOGY

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The Motivation to Work. Special Supplement to "The Selection of Trainees Under MDTA".

OCCUPATIONAL SOCIOLOGY

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VT 003 755 MP 000 224 77
Women, Work and Poverty.

VT 003 756 MP 000 225 47
Fact Sheet on Women in Professional and Technical Positions.

VT 003 757 MP 000 226 77
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Fact Sheet on Educational Attainment of Nonwhite Women.

VT 005 226 ED 024 774 113
A Demonstration On-the-Job Training Program for Semi-Professional Personnel in Youth Employment Programs.

VT 005 631 ED 021 070 95
Worker Adjustment--Youth in Transition from School to Work, An Annotated Bibliography of Recent Literature. Bibliography 2.

VT 006 564 ED 027 381 79
Working With Organizations to Develop "New Careers" Programs.

VT 007 854 ED 027 415 81
The Low-Income Farmer in a Changing Society.

TECHNICAL EDUCATION

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Vocational-Technical Education Needs of Montana Youth and Adults Panel of Consultants Reports.

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Ohio Public Technical Education Notebook, 1967-68.

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Regional Conference Summaries, 1966.

VT 001 820 ED 019 407 6
Statement Before the General Subcommittee on Education of the Subcommittee on Education and Labor, House of Representatives, Thursday, June 9, 1966.

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State Reports of Vocational-Technical Program Development, Fiscal Year 1966.

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Electronic Technician Personnel and Training Needs of Iowa Industries.

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VT 007 875 ED 027 419 109
Summer Institute to Train Data Processing Teachers for the New Oklahoma State-Wide Computer Science System, Phase II. Final Report.

VT 007 876 ED 027 420 72
A Guide for Planning Facilities for Occupational Preparation Programs in Metallurgy Technology. Research 28.

VT 007 919 92
Progress Report (Nov. 1, 1968-Jan. 31, 1969).

VT 007 989 ED 028 278 72
A Guide for Planning Facilities for Occupational Preparation Programs in Electrical Technology. Research 30.

VT 007 993 ED 027 434 73
A Guide for Planning Facilities for Occupational Preparation Programs in Laboratory Animal Science Technology. Research 27.

VT 009 006 ED (See Dec. '69 RIE) 118
Abstracts of Research and Related Materials in Vocational and Technical Education (ARM), Summer 1969.

VT 009 007 ED (See Dec. '69 RIE) 118
Microfiche Collection of Clearinghouse Documents Reported in Abstracts on Vocational and Technical Education (ARM), Summer 1969.

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VT 001 552 2
A Report and Description of the Apprentice Education Program in Los Angeles Colleges and Adult Schools, 1965-66.

VT 001 718 ED 018 606 4
Citizens' Survey of Shiawassee-Clinton County, Vocational-Technical Feasibility Study.

VT 001 835 ED 019 410 39
Development of a Performance Specimen Check List for Machining Personnel.

VT 002 297 32
The Development and Use of an Instrumentation Technology Curriculum Guide.

VT 002 383 ED 019 441 12
Standard Practice Instructions, Procedures and Record Keeping at the Vocational-Technical Schools Relative to Production Work Activities.

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Electronic Technician Personnel and Training Needs of Iowa Industries.

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Technology and Manpower in Design and Drafting 1965-75.

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National Apprenticeship Policy of the National Automobile Dealers Association and the Automotive Trade Association Managers.

VT 003 554 ED 018 631 18
National Apprenticeship and Training Standards for Glaziers and Glassworkers.

VT 004 211 104
Innovation in Trade-Technical Teacher Education.

VT 004 392 ED 021 999 84
Education--the Bridge Between Man and His Work; The Samuel Leonard Fick Lecture on Industrial Education.

VT 004 420 ED 020 327 55
The Role of Mathematics in Electrical-Electronic Technology.

VT 005 467 ED 022 034 25
Civil Engineering Technology Consultants' Workshop, 1967.

VT 005 597 66
Comparative Study of High School Graduates from 1-Year, Full Day and 2-Year, Half Day Vocational Programs in Suffolk County, N.Y.

VT 005 717 ED 020 436 26
Experimental and Demonstration Manpower Project for Training and Placement of Youthful Inmates of Draper Correctional Center at Elmore, Alabama. First Progress Report.

VT 006 371 ED 022 916 63
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VT 006 519 ED 022 055 104
Project "SIP"--Solving Industrial Problems. Final Report.

VT 006 682 ED 025 625 105
Relationship of Occupational Experience, Teaching Experience, Technical Training and College Training to Rated Teaching Effectiveness of Vocational Electronics Teachers.

VT 006 874 ED 022 927 34
Horological and Micro-Precision Project.

VT 007 322 ED 025 634 106
An Analysis of Factors Involved in the Recruitment, Preparation, Certification, and Retention of Day Trade Teachers.

VT 007 461 ED 027 392 106
Cooperative Education Program for Prospective Vocational-Techical Education Teachers (COPE). First Annual Report.

VT 007 504 ED 027 393 69
Performance Related to Indicators of Potential of Tuskegee Institute MDTA Trainees.

VT 007 723 ED 026 526 81
A Demonstration Training Program for Potential School Dropouts. A Service Station Training School for Dropout-Prone Students.

VT 007 752 ED 025 678 108
The Training and Technology Project Experimental Research Program for Vocational-Technical Teachers.

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A Guide for Planning Facilities for Occupational Preparation Programs in Electrical Technology. Research 30.

VT 007 998 ED 028 280 73
A Guide for Planning Facilities for Occupational Preparation Programs in Automotive Service. Research 29.

VT 008 154 ED 028 296 116
Forecast Systems Analysis and Training Methods for Electronics Maintenance Training.

GENERAL VOCATIONAL & TECHNICAL EDUCATION

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Vocational-Technical Education Needs of Montana Youth and Adults; Panel of Consultants Reports.

VT 000 458 ED 022 838 2
Joint Programs in Vocational Rehabilitation' Proceedings of a Regional Institute, 1964.

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Ohio Public Technical Education Notebook, 1967-68.

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VT 001 553 ED 018 590 38
A Theory of Work Adjustment. Minnesota Studies in Vocational Rehabilitation, 15.

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Regulations Governing the Establishment and Operation of the Program of Industrial and Technical Education as Authorized by the 1961 General Assembly.

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VT 001 702 4
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Enhancing the Occupational Outlook and Vocational Aspirations of Southern Secondary Youth, A Conference of Secondary School Principals and Counselors.

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VT 002 188 ED 020 304 9
Experimental and Demonstration Manpower Project, Training and Placement of Youthful Inmates, Draper Correctional Center, Elmore, Alabama. Tenth Progress Report.

VT 002 189 ED 020 305 9
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Analysis of Questionnaire Completed by Utah Vocational Directors.

VT 002 794 ED 022 850 41
Rhode Island: Its People and Its Economy; Rhode Island Vocational-Technical Education Development Project.

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Technical-Vocational Education in Vietnam.

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Business Education: An Evaluative Inventory.

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Titles for Technology: An Annotated Bibliography. Compiled at the 1967 Summer Institute of Technology for Children (Marlton, N.J.).
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VT 003 849 MP 000 261 50
Job Tenure of Workers, January 1966.

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Lectures on the Labour Force and Its Employment Delivered to First Study Course (September 17-December 7, 1962).
VT 004 820 ED 020 385 61
History of Employment and Manpower Policy in the United States. Parts III and IV.
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Workshop on Job Development for Disadvantaged Youth. New York, N.Y. Manpower Training Series.
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VT 004 727 ED 020 369 58
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Progress and Prospects, The Report of the National Conference of Governors' Commissions on the Status of Women. (2nd, Washington, D.C., July 28-30, 1965).

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Joint Programs in Vocational Rehabilitation; Proceedings of a Regional Institute, 1964.
VT 001 891 ED 019 414 7
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VT 002 505 ED 026 456 39
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VT 002 135 ED 020 303 9
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VT 002 623 ED 019 459 40
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VT 004 179 MP 000 342 53
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Training Health Service Workers--The Critical Challenge, Proceedings of the Conference on Job Development and Training for Workers in Health Services, 1966.
VT 004 790 ED 020 383 60
Health Manpower 1966-75, A Study of Requirements and Supply.
VT 005 426 ED 020 420 88
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Practical Nursing Education Today. Report of the 1965 Survey of 722 Practical Nursing Programs.
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Dental Assisting Program, July 1, 1966-June 30, 1967.
VT 004 251 MP 000 360 20
Report of Dental Assistants Education and Training Program, Summer 1966.
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Suggested Guidelines for Developing a Training Program for the Nursing Unit Management Assistant (Ward Clerk).
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INSTITUTE FOR LOCAL DIRECTORS OF SPECIAL EDUCATION, CHARLOTTESVILLE, VIRGINIA, MARCH 3-5, 1965
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Manpower in Economic and Social Growth; Proceedings of International Manpower Seminar, 1966.

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International Trade Union Seminar on Active Manpower Policy, 1963.
VT 001 795 ED 019 401 5
Education and Training, Passport to Opportunity. Fourth Annual Report...to the Congress.
VT 001 822 ED 019 408 6
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VT 002 511 ED 023 790 13
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VT 002 623 ED 019 459 40
Report on the Inter-Regional Study Tour on Manpower Assessment and Planning in the Union of Soviet Socialist Republics, 8 September-5 October 1963.
VT 002 877 ED 016 796 15
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VT 003 748 ED 016 827 46
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VT 003 782 ED 018 642 47
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VT 004 570 ED 022 008 56
Manpower and Automation Research Sponsored by the Office of Manpower, Automation and Training, July 1, 1962-June 30, 1963.
VT 004 572 ED 022 009 58
Manpower and Automation Research Sponsored by the Office of Manpower, Automation and Training, July 1, 1963-June 30, 1964.
VT 005 211 ED 022 024 23
Symposium on Manpower and the War on Hunger (Washington, D.C., May 3-5, 1967).
VT 005 229 ED 022 027 88
Manpower and Automation Research Sponsored by the Office of Manpower, Automation and Training, Through June 30, 1965.
VT 005 478 ED 026 476 25
Manpower in Economic and Social Growth; Proceedings of International Manpower Seminar, 1966.
VT 005 796 ED 022 907 62
Adjusting to Change. Technology and the American Economy. Appendix Volume III.
VT 005 990 ED 025 605 67
Antipoverty Work and Training Efforts: Goals and Reality.
VT 006 228 ED 022 049 89
Manpower Research Projects Sponsored by the U.S. Department of Labor, Manpower Administration, Through June 30, 1966.

MANPOWER DEVELOPMENT AND TRAINING ACT PROGRAMS
VT 001 795 ED 019 401 5
Education and Training, Passport to Opportunity. Fourth Annual Report...to the Congress.
VT 001 822 ED 019 408 6
The Manpower Development and Training Act, Programs and Procedures.
VT 002 188 ED 020 304 9
Experimental and Demonstration Manpower Project, Training and Placement of Youthful Inmates, Draper Correctional Center, Elmore, Alabama. Tenth Progress Report.
VT 002 189 ED 020 305 9
Experimental and Demonstration Manpower Project, Training and Placement of Youthful Inmates, Draper Correctional Center, Elmore, Alabama. Ninth Progress Report.
VT 002 190 ED 020 306 10
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VT 002 191 ED 020 307 10
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VT 002 194 ED 020 310 11
Experiences of the Draper E and D Project for the CMAT Program, Operation Retrieval--Youth. Seventh Progress Report.
VT 002 403 ED 019 443 12
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VT 002 511 ED 023 790 13
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VT 002 700 ED 020 316 66
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VT 003 619 ED 022 852 19
Practical Nursing Education Today. Report of the 1965 Survey of 722 Practical Nursing Programs.
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An Overview of Manpower Development and Training Under Redevelopment Area Residents Program, 1963-1966.
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VT 004 319 ED 015 329 20
The Role of Technical Schools in Improving the Skills and Earning Capacity of Rural Manpower, A Case Study.
VT 004 371 ED 021 997 54
Manpower Development and Training Act of 1962, MDTA Handbook. Chapter II, Training Needs Survey.
VT 005 717 ED 020 436 26
Experimental and Demonstration Manpower Project for Training and Placement of Youthful Inmates of Draper Correctional Center at Elmore, Alabama. First Progress Report.
VT 005 718 ED 020 437 26
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VT 005 719 ED 020 433 27
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VT 006 814 ED 022 062 34
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VT 007 343 ED 025 635 68
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VT 007 504 ED 027 393 69
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VT 007 774 ED 026 530 81
Inner-City Negro Youth in a Job Training Project: A Study of Factors Related to Attrition and Job Success.

MANPOWER NEEDS
VT 002 880 ED 026 457 88
Methods of Long-Term Projection of Requirements for and Supply of Qualified Manpower.
VT 003 700 ED 021 050 19
Emerging Programs of Vocational and Technical Education in Secondary Schools of Missouri in Relation to Manpower Needs.
VT 004 357 ED 021 994 21
Toward Quality in Nursing, Needs and Goals, Report of the Surgeon General's Consultant Group on Nursing.
VT 004 371 ED 021 997 54
Manpower Development and Training Act of 1962, MDTA Handbook. Chapter II, Training Needs Survey.
VT 004 790 ED 020 383 60
Health Manpower 1966-75, A Study of Requirements and Supply.
VT 005 172 ED 028 241 84
Educating for Work. A Report on the Current Scene in Vocational Education.
VT 005 773 ED 023 838 61
Manpower Requirements for Planning; An International Comparison Approach. Volume I.
VT 007 281 63
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VT 007 611 ED 025 661 90
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VT 001 521 ED 024 756 2
International Trade Union Seminar on Active Manpower Policy, 1963.
VT 001 572 ED 021 962 39
Critical Issues in Employment Policy. A Report of The Princeton Manpower Symposium, May 12-13, 1966.
VT 002 623 ED 019 459 40
Report on the Inter-Regional Study Tour on Manpower Assessment and Planning in the Union of Soviet Republics,
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VT 003 668 MP 000 206 45
New Challenges--New Responsibilities. (Excerpts from Remarks to Community Service Workshop, 1966).
VT 003 843 MP 000 255 50
Work Experience of the Population in 1965.
VT 004 503 ED 020 329 55
Lectures on the Labour Force and Its Employment Delivered to First Study Course (September 17-December 7, 1962).
VT 004 509 ED 017 709 55
Manpower Policy and Programmes in the United States.
VT 004 510 ED 022 003 55
International Joint Seminar on Geographical and Occupational Mobility of Manpower (Castelfusano, November 19-22, 1963).
VT 004 521 ED 022 006 56
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VT 004 570 ED 022 008 56
Manpower and Automation Research Sponsored by the Office of Manpower, Automation and Training, July 1, 1962-June 30, 1963.
VT 004 572 ED 022 009 58
Manpower and Automation Research Sponsored by the Office of Manpower, Automation and Training, July 1, 1963-June 30, 1964.
VT 004 819 ED 020 384 60
History of Employment and Manpower Policy in the United States. Parts I and II.
VT 004 820 ED 020 385 61
History of Employment and Manpower Policy in the United States. Parts III and IV.
VT 005 229 ED 022 027 88
Manpower and Automation Research Sponsored by the Office of Manpower, Automation and Training, Through June 30, 1965.
VT 006 228 ED 022 049 89
Manpower Research Projects Sponsored by the U.S. Department of Labor, Manpower Administration, Through June 30, 1966.

MANUFACTURING INDUSTRY
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Electronic Technician Personnel and Training Needs of Iowa Industries.
VT 003 219 ED 022 851 41
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VT 003 876 MP 000 285 51
Wage Developments in Manufacturing, 1966.

MASTER PLANS
VT 002 886 ED 016 801 15
Vocational Education Master Plan Report.

MASTERS THESES
VT 004 817 ED 021 058 58
Home Economics Education. Home Economics Research Abstracts--1966, No. 5.

MATHEMATICS
VT 004 420 ED 020 327 55
The Role of Mathematics in Electrical-Electronic Technology.

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VT 002 700 ED 020 316 66
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VT 007 611 ED 025 661 90
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MEDICAL LABORATORY ASSISTANTS
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VT 007 353 ED 026 506 80
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Research and Demonstration for Nurse's Aide Training.

METALLURGY TECHNOLOGY
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VT 002 880 ED 026 457 88
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VT 004 521 ED 022 006 56
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VT 004 745 ED 020 379 58
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VT 003 838 ED 014 601 49
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VT 003 839 ED 014 602 49
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VT 004 718 ED 020 361 57
The Hired Farm Working Force of 1966, a Statistical Report.

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VT 005 605 ED 022 902 78
Report. Legislative Document (1967), No. 4.

MIGRATION
VT 004 510 ED 022 003 55
International Joint Seminar on Geographical and Occupational Mobility of Manpower (Castelfusano, November 19-22, 1963).

MIGRATION PATTERNS
VT 003 862 ED 014 609 51
Domestic Agricultural Migrants in the United States.

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VT 006 823 ED 024 806 68
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VT 002 700 ED 020 316 66
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VT 003 753 ED 014 590 47
Why Women Work.

MOTOR DEVELOPMENT
VT 007 817 ED 026 536 70
Exploring the Use of the GATB With Vocational-Technical Bound Ninth Grade Boys.

MULTIMEDIA INSTRUCTION
VT 007 286 ED 027 387 115
An Experimental Pilot Study to Explore the Use of an Audio-Visual-Tutorial Laboratory in the Secretarial Skills Area.

NATIONAL ASSOCIATION OF MANUFACTURERS CONGRESS OF AMERICAN INDUSTRY, DECEMBER 8, 1967, NEW YORK, NEW YORK
VT 004 301 ED 027 372 84
Focus on Vocational Education. NAM Congress of American Industry, 1967.

NATIONAL COMMITTEE ON SECONDARY EDUCATION
VT 005 172 ED 028 241 84
Educating for Work. A Report on the Current Scene in Vocational Education.

NATIONAL CONFERENCE DIFFUSION EDUCATIONAL IDEAS, EAST LANSING, MICHIGAN, MARCH 26-28, 1968
VT 007 816 ED 026 535 92
Research Implications for Educational Diffusion.

NATIONAL CONFERENCE ON CURRICULUM DEVELOPMENT IN VOCATIONAL AND TECHNICAL EDUCATION, TEXAS, MARCH 5-7, 1969
VT 008 101 ED 027 439 35
Papers Presented at the National Conference on Curriculum Development in Vocational and Technical Education. (Dallas, March 5-7, 1969).

NATIONAL CONFERENCE ON EVALUATING VOCATIONAL AND TECHNICAL EDUCATION PROGRAMS, ATLANTIC CITY, NEW JERSEY, OCTOBER 6-9, 1968
VT 008 509 70
Speeches Presented at the National Conference on Evaluating Vocational and Technical Education Programs.

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NATIONAL LEAGUE FOR NURSING REGIONAL WORKSHOPS, 1966
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NATIONAL RESEARCH COUNCIL
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NATIONAL SEMINAR ON VOCATIONAL GUIDANCE
VT 007 493 ED 024 826 99
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NATIONAL SURVEYS
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VT 002 340 ED 019 439 11
State Reports of Vocational-Technical Program Development, Fiscal Year 1966.
VT 003 619 ED 022 852 19
Practical Nursing Education Today. Report of the 1965 Survey of 722 Practical Nursing Programs.
VT 004 950 22
Educational Statistics for Nepal.
VT 007 806 ED 028 265 108
Nurse-Faculty Census, 1968.

NATIONAL VOCATIONAL TECHNICAL TEACHER EDUCATION SEMINAR, CHICAGO, ILLINOIS, OCTOBER 21-24, 1968
VT 007 923 ED 027 424 110
Annual National Vocational-Technical Teacher Education Seminar Proceedings.

NEGRO COLLEGES
VT 006 015 ED 025 606 95
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NEIGHBORHOOD YOUTH CORPS
VT 005 990 ED 025 605 67
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NEIGHBORHOOD YOUTH CORPS FIRST NATIONAL CONFERENCE, ST. LOUIS, MISSOURI, MAY 2-4, 1966
VT 002 294 76
Neighborhood Youth Corps First National Conference Report, 1966.

NEW CAREERS PROGRAMS
VT 006 564 ED 027 381 79
Working with Organizations to Develop "New Careers" Programs.

NONCOLLEGE PREPARATORY STUDENTS
VT 007 513 ED 027 394 69
A Study to Identify Educational Needs of Non-College Bound Students in a Rural Public High School of Six Hundred Students.

NURSES
VT 007 317 ED 028 252 98
The Nurse Career-Pattern Study; Bibliographic Data Reported by Entering Students, Fall, 1965.

NURSES AIDES
VT 007 904 ED 028 274 82
Research and Demonstration for Nurse's Aide Training.

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VT 004 357 ED 021 994 21
Toward Quality in Nursing, Needs and Goals, Report of the Surgeon General's Consultant Group on Nursing.
VT 005 954 113
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Structure and Change of Some Role Perceptions in Nursing School.
VT 007 806 ED 028 265 108
Nurse-Faculty Census, 1968.

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VT 007 530 ED 024 827 100
Educational and Occupational Aspirations and Expectations of High School Juniors and Seniors in the State of Washington. Interim Report, No. 14.

OCCUPATIONAL CHOICE
VT 006 015 ED 025 606 95
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VT 006 919 ED 022 959 97
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VT 007 456 ED 024 821 99
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VT 006 291 ED 021 150 62
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VT 006 359 ED 027 379 96
Counselor's Desk Aid; Eighteen Basic Vocational Directions. Summary Information.

OCCUPATIONAL EDUCATION PROJECT
VT 005 467 ED 022 034 25
Civil Engineering Technology Consultants' Workshop, 1967.

OCCUPATIONAL GUIDANCE
VT 001 722 ED 015 250 94
Enhancing the Occupational Outlook and Vocational Aspirations of Southern Secondary Youth, A Conference of Secondary School Principals and Counselors.
VT 005 517 89
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VT 007 753 ED 026 527 101
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VT 008 074 ED 028 286 102
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VT 004 375 ED 021 998 54
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VT 004 510 ED 022 003 55
International Joint Seminar on Geographical and Occupational Mobility of Manpower (Castelfusano, November 19-22, 1963).
VT 005 568 ED 028 242 26
Health Services Mobility Study, Plan of Work.

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VT 002 564 ED 016 789 40
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VT 004 723 ED 020 365 57
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VT 005 432 ED 022 032 24
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Joint Programs in Vocational Rehabilitation; Proceedings of a Regional Institute, 1964.
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VT 002 389 ED 027 371 118
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Microfiche Collection of Clearinghouse Documents Reported in Abstracts of Research and Related Materials in Vocational and Technical Education (ARM), Summer 1969.

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VT 001 797 ED 019 402 5
The Vocational Education Act of 1963.

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Montana Vocational Education Association, Helena
Montana State Coll., Bozeman. Dept. of Agricultural Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 63 94p.

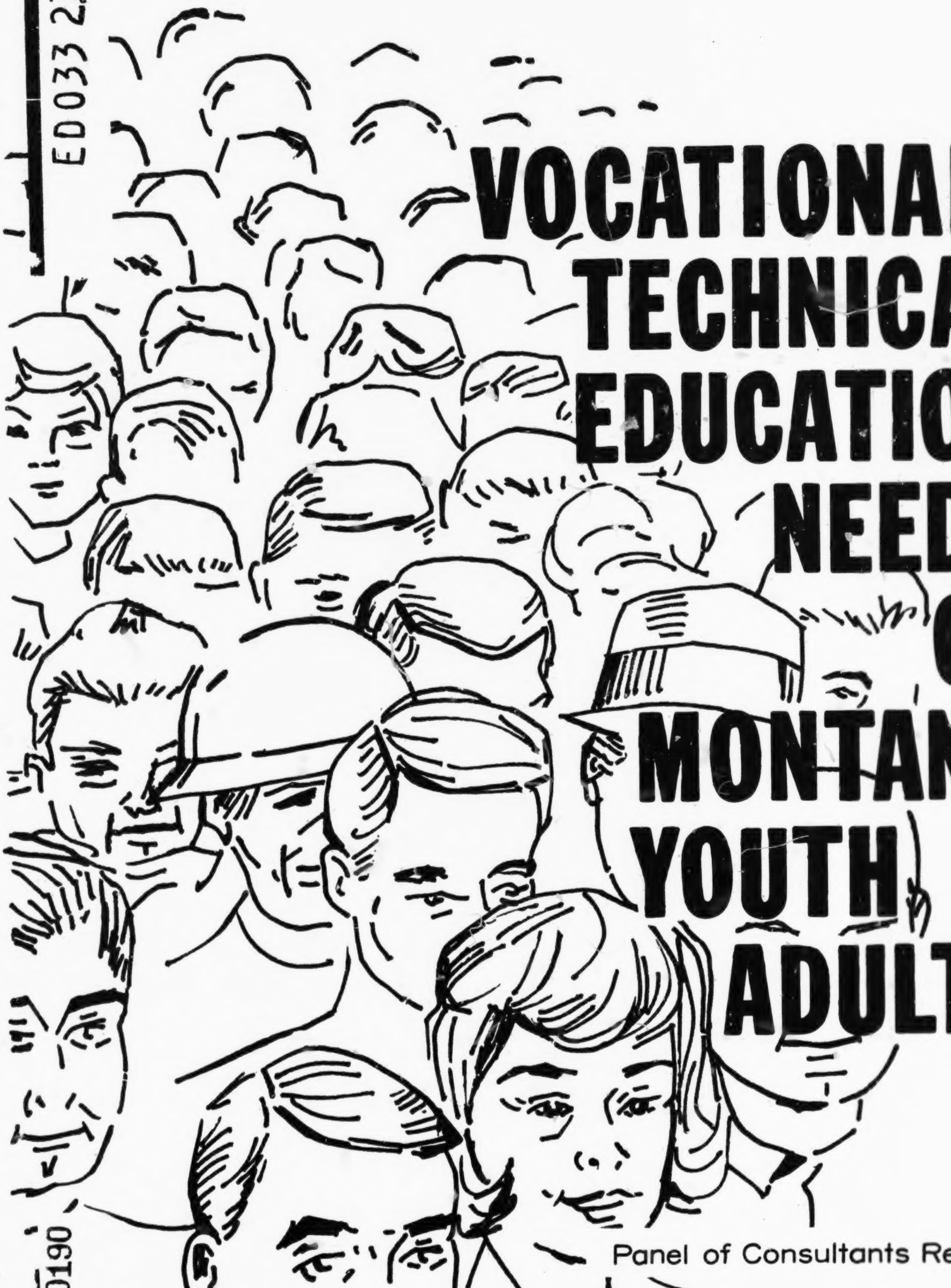
*VOCATIONAL EDUCATION; *TECHNICAL EDUCATION; EMPLOYMENT TRENDS; TRADE AND INDUSTRIAL EDUCATION; VOCATIONAL REHABILITATION; BUSINESS EDUCATION; AGRICULTURAL EDUCATION; HOME ECONOMICS EDUCATION; HIGH SCHOOL GRADUATES; PRACTICAL ARTS; COLLEGE ATTENDANCE; INDUSTRIAL STRUCTURE; POPULATION DISTRIBUTION; ADULT VOCATIONAL EDUCATION; HIGH SCHOOLS; POST SECONDARY EDUCATION; *EDUCATIONAL NEEDS; EMPLOYMENT OPPORTUNITIES
MONTANA

These 16 papers were prepared by Montana vocational and technical education teachers, administrators, supervisors, teacher educators, and others for presentation and discussion at public meetings. The titles are: "Job Opportunities and Training Needs of Montana Youth and Adults," "Trade, Industrial, and Technical Education in Montana," "Vocational and Technical Education Needs of Montana Rehabilitation Clients," "Vocational-Technical Education in the Helena Seniors High School Aeronautics Departments," "Missoula County High School Vocational and Practical Arts Program for Youth and Adults," "Business Education Programs for Montana High Schools," "Programs of Agricultural Education for Montana Youth," Vocational Home Economics Education In Montana," "Vocational, Technical, and Practical Arts Education in Montana Metropolitan High Schools," "The Program of Practical Arts," "A Summary and Interpretation of a Study of 1958 Montana High School Graduates Attendance in Institutions of Higher Education," "The Industrial Complex in Montana and Its Need for Technical and Vocationally Trained Persons," "Agriculture, Agri-Business and Education," "Montana Agriculture and Its Importance," "Youth Speaks for Vocational Education," and "Some Montana Population Facts and Myths." (PS)

VT000 190

ED033 237

94p.



VOCATIONAL-TECHNICAL EDUCATION NEEDS OF MONTANA YOUTH & ADULTS

Panel of Consultants Reports

Sponsored by the
Montana Vocational Education Assn.

VT000190

VOCATIONAL AND TECHNICAL EDUCATION NEEDS OF MONTANA YOUTH AND ADULTS

by
Leo L. Knuti

The primary purpose of this study is to point up the needs of Montana youth and adults for vocational and technical education. The panel reports suggest that Montana has a definite lag in opportunities for vocational and technical education.

METHODS OF STUDY

The methods of this study involved assignments to 16 Montanans to develop papers dealing with the central theme "The Vocational and Technical Education Needs of Montana Youth and Adults". Public meetings were held for the panel reports, which were different at each meeting. Representative people were invited to the meetings to hear and discuss the reports. The final phase of this study involves the publishing of the reports and their distribution to interested persons and agencies in furtherance of vocational and technical education programs and facilities.

PANEL MEETINGS ON VOCATIONAL-TECHNICAL EDUCATION NEEDS

Meetings of the Montana Panel of Consultants in Vocational-Technical Education Needs were held at Billings April 16, Great Falls May 7, and Missoula May 9. Attendance included school administrators, board of education members, trade and labor representatives, teachers, school guidance counsellors, teacher educators and supervisors, representatives of agriculture, business and industry, college staff members, representatives of the Montana Employment Service, Vocational Rehabilitation, business colleges and the press. Improvements in Vocational-Technical education may rest on a gross-roots movement and impetus provided by individuals, organizations and groups as above.

SPONSORS OF THE 1963 MONTANA PANEL OF CONSULTANTS ON VOCATIONAL AND TECHNICAL EDUCATION NEEDS

The Montana Vocational Association, an affiliate of the American Vocational Association, is the sponsor of this study. This group consists of vocational and technical education teachers, administrators, supervisors and teacher educators. The Secretary of the MVA is Larry Mayer, Aeronautics School, Helena, Montana.

STUDY MOTIVATION

This Montana study was strongly motivated by the 1962 report, Education for a Changing World of Work by the Panel of Consultants in Vocational Education requested by the President of the United States and published by the U. S. Department of Health, Education and Welfare.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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THE NEED FOR VOCATIONAL AND TECHNICAL EDUCATION

One-half or more of our high school and post-high school youth and adults should be receiving vocational and technical education. Continuous study is needed to fill the gaps of training needs. Vocational and technical training is needed by almost 100 percent of youth and adults not engaged in the professions. More programs are needed locally and on an area basis. This means more classroom, shops and teachers.

MONTANA PROGRAMS OF VOCATIONAL AND TECHNICAL EDUCATION

Whereas some areas of Montana are severely lacking in vocational and technical education, excellent programs do exist. High schools with a variety of trade and technical programs are at Helena, Missoula and Kalispell. Other Montana high schools are improving their vocational-technical programs in depth, in variety and by improved facilities. A good program is provided at Northern Montana College at Havre. A variety of business education is provided in all Montana high schools. Private business colleges serve the Billings, Great Falls, Butte and Missoula areas. Agriculture and Agricultural Mechanics are provided in about one-third of Montana high schools. Home Economics Education is taught in a majority of Montana high schools. General Industrial Arts programs are taught in a majority of Montana high schools.

SCHOOL DROP-OUTS AND VOCATIONAL-TECHNICAL EDUCATION

National attention is being focused on high school drop-outs. Drop-out information on local and state level is often not available. Montana College drop-out rates approximate two-thirds of those who start college. If college completion is a major Montana secondary school objective, only one in ten entering Montana high schools freshmen, currently, achieve this status.

WOMENS EMPLOYMENT

Women of Montana constitute about one-third of the employed, which is equivalent to the national figure. Montana employment and training opportunities for women appear to exceed that of men.

OFFICIAL AGENCIES

The State Department of Public Instruction, Helena, Montana, is the official agency directing and administering vocational and technical education programs of a secondary level. Other important agencies concerned with vocational and technical education are local schools, colleges, the State Employment Service, industry and agriculture, and Vocational Rehabilitation.

WHERE VOCATIONAL AND TECHNICAL EDUCATION SHOULD BE PROVIDED

High schools, area vocational schools, junior colleges and private trade and technical schools are the major providers of vocational and technical education in the United States.

USES TO BE MADE OF THE PANEL OF CONSULTANTS REPORTS ON VOCATIONAL-TECHNICAL EDUCATION

The reports of the 1963 Montana Panel of Consultants on Vocational and Technical Education Needs of Youth and Adults should serve as resource information for all those persons and agencies interested in securing and furthering programs of vocational and technical education. It is hoped that this report will help stimulate needed expansion in programs of vocational and technical education. The emphasis here is on Montana Information.

An appreciation recognition: This report has been published by the Agricultural Education Department of Montana State College in furtherance of the educational opportunities of Montana youth and adults.

Leo L. Knuti, Head, Agricultural Education Department
Montana State College, and Study Director

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JOB OPPORTUNITIES AND TRAINING NEEDS OF MONTANA YOUTH AND ADULTS

By Jack Egge, Supervisor of Special
Applicant Services, Montana Employment Service
Helena, Montana

I am to devote my talk today on the topic "Job Opportunities and Training Needs of Montana Youth and Adults". However, because of the nature and scope of the subject matter, as suggested by the topic title, I should like to concentrate initially on the group which, I feel, provides the greatest challenge, and which also might easily be considered Montana's richest resource--our youth.

Each year, many hundreds of Montana youth, boys and girls, reach a certain point in their young lives when they must make decisions which will determine their places in the labor market--in most cases for the rest of their lives.

You might even consider the decisions as being alternatives between a material thing which they need or demand now, and something nebulous or distant which they may wish they had chosen ten, fifteen or twenty years from now.

Yes, youth is a time for being fanciful and romantic, but it is also a time of anxiety when ordinary day-to-day problems appear most perplexing. It is also the period when each youngster is forming the basic principles he will try to follow for the rest of his life.

Obviously then, youth are being forced to make these momentous decisions at a time when they have just arrived at the point of being capable of making decisions regarding anything about themselves.

The preparations he makes, the assistance he is offered, and the decisions he makes will have far-reaching consequences on his future.

In recent years, the prime sources of vocational guidance--such as families, friends, schools--have been expanded, as the general education level of the population rose, and more particularly as the schools expanded their guidance and training facilities.

However, spanning those same years, our economy has likewise grown--in complexity and diversity--and is still growing.

For example, we know that technological change is continuously creating new kinds of jobs each year, making certain skills obsolete, while creating newer and even higher skills. We also know, of course, that workers with the least education and those with the most elementary skills are feeling, and will continue to feel, the impact of automation most acutely.

We must determinedly welcome the responsibility of aiding youth, and the entire labor force, to adjust to this complex labor market.

However, because employment problems of youth are so closely allied with the problems of growing up, cooperation of all groups--schools, churches, families, volunteer or government agencies--will be required to assist and influence the fateful decisions youth must make.

How well are we helping youth adjust to our complex and changing economy?

Well, youth unemployment is becoming an increasingly serious problem. It is estimated nationally, for example, that by the end of the 1960 decade, about 26 million youth will have looked for their first job. Such an explosive situation has already shown itself in the unemployment totals--18 percent youth in 1961. This rate is nearly 2½ times the national average, and even higher among minority groups, and among those, unfortunately, unable to complete their high school education--the dropouts. As a matter of fact, many of today's long-term unemployed can be definitely traced to the dropouts of fifteen to twenty years ago. Robert C. Goodwin, Director, Bureau of Employment Security, U. S. Department of Labor, "indicates that the problem of unemployment, in a large measure, is a reflection of the more basic problem of inadequate education."

"Furthermore," Mr. Goodwin continues, "We know that many young people who are reported by the Census as being employed are engaged in stop-gap jobs, or jobs which do not provide them with adequate income or opportunities for advancement."

It is ironic that even with the high overall rate of unemployment--and I'm speaking again on the national level--we are still being harrassed by many manpower shortages, even in those specific locales experiencing unusually high unemployment. This situation can even be recognized as existing--though on a much smaller scale--in Montana.

One proposed solution to the problem involves stimulating migration, that is, the bringing together of available workers in one area, with the available job openings in another. This proposal, however, would be a most difficult solution and, at best, would barely scrape the surface.

Retraining of workers in skills in line with existing openings in or near the area of residence is another solution proposed, and which is currently being administered in the form of the Area Redevelopment Act and the Manpower Development and Training Act, each of which I shall dwell upon later. Here again, however, plans call for the training of a number of workers which also constitutes only a relatively small percentage of the idled or under-employed labor force.

Basically, the need must be satisfied during a much earlier phase--in the workers formative years. We can predict quite accurately that in the years ahead, the requirements of our complicated labor force will consist of a sounder education, a much higher degree of skill, as well as the higher qualities of leadership and creativeness. The brawn in a worker will no longer be sufficient. As a matter of fact, the number of unskilled job openings is diminishing, and will continue to diminish, a field, by the way, previously and traditionally open to dropouts.

It is interesting to note that, of the first 9,000 individuals trained nationwide under the Area Redevelopment and Manpower Training Acts--those whose skills were outmoded--92% were former school dropouts.

In addition to expanded vocational preparation in the early years, we can also place greater cooperative effort towards creating more jobs for these newcomers--in itself a huge and complex task. It can be said that these explosive factors, together with the effects of automation, have resulted in alterations within our occupational structure which, in turn, have changed us into basically a "white collar" society. Since 1956, as a matter of fact, employment in "white collar" jobs has exceeded that in "blue collar" activities and the trend is continuing rapidly.

How does the projected labor market compare with the projected demands?

First of all, no one can predict precisely what will happen in our labor market. But we can supply certain judgments which are almost surely to develop.

By 1970, for example, the professional and technical occupations will show the most rapid rate of growth--over 40 percent.

The clerical and sales occupations will also grow faster than average--about 27 percent.

Roughly the same 27 percent rate of growth will apply to the proprietary and managerial fields.

The demand for skilled craftsmen will increase by another 25 percent.

Equipment operatives, or the semi-skilled group, will grow rather significantly as well--over 20 percent.

The service field will also show a remarkable growth, somewhere between 20 to 30 percent.

On the other side of the ledger we find that unskilled openings--as mentioned earlier--will not hold up, actually dropping 3 to 5 percent.

And, finally, farm labor opportunities will decline by about 15 percent.

Let's translate and clarify these statistics further in terms of industrial groupings.

The construction field, including all types, will show an increase of over 30 percent--reflecting the related growths in semi-skilled, skilled and technical occupations.

There will be a similar 30 percent growth in the Finance, Insurance and Real Estate industry--reflecting the projected increases in the clerical and sales fields, as well as the continued growth expected in our industrial and urban society.

We can also anticipate 25 percent growth in wholesale-retail trade, government and other services, and the manufacturing industries. Each reflects the increases again in most of the occupations above the unskilled level.

Transportation, public utilities, and the mining industries all point to increases ranging from 5 to 14 percent while the agriculture industry, as we have previously indicated, will show a continued manpower decline.

The projected labor force picture in comparison will look something like this.

By far the largest increase will have occurred in the 14 to 24 age bracket--youth--and which will make up nearly 46 percent of the total labor force increase.

There will be only a small increase in the prime age group--25 to 34--and actually a small decrease in the number of workers in the 35 to 44 age bracket.

However, there will be another huge 40 or 41 percent increase in the 45 and over age group, more commonly known as the Older Worker group. Incidentally, this increase, combined with youth, will constitute nearly 90 percent of the total labor force growth.

But, the Older Worker group presents a unique set of problems which, although similar in certain respects, must be treated somewhat differently.

The ease with which our young people will fill the resulting gap in skilled manpower will be the decisive factor in the economic struggle. It will become increasingly important that they obtain the necessary education and the vocational training which will prepare them for the occupations which they will be expanding.

Because employment stabilization is one of the prime goals of the entire employment security program, the Employment Service, as a matter of basic policy, is strongly interested in the wider availability of vocational guidance and training.

On a more local, that is, statewide, level let us review the training and retraining needs and accomplishments on behalf of youth and adults in connection with the Area Redevelopment and Manpower Development and Training Acts.

Both training programs are similar in basic respects; that is, they were established and set in motion to train or retrain certain certain individuals who either had no trade, whose skills were dormant or not in demand, or those who had aspired to trades, since outdated by technological changes.

Working together, both public and private groups or agencies, as well as community leaders, set about to determine what skills were available, the need for other skills in the area, and then to determine the type of training to be given. As you will note, the success of the many surveys and subsequent training proposals was largely due to local initiative.

As of today 383 Montanans have successfully completed training in 15 different occupations, all in demand. An additional 76 persons are currently involved in either A.R.A. or M.D.T.A. training programs, involving 5 additional occupations, also in constant demand.

The people involved in these various programs include youth, older workers and other unemployed or underemployed adults--both men and women. In the majority of cases, the trainees were selected on the basis of unfilled job openings being available to them upon satisfactory completion of the course.

To go into the training programs in a little more detail, I should like to submit a summary of the occupations in which these people were, and are being, trained and placed:

	In Training	Trained	Placed
1. Professional and technical field;			
Forestry Aids	20		
2. Clerical and sales field;			
Stenographer	15	20	16
3. Skilled craftsmen;			
Logging Equipment Mechanics		10	10
Welders		37	33
Lumber Graders		23	22
Motor Analysts	14	27	26
Structural Steel Workers		19	13
Hardrock Miners		91	87
Carpenter Upgradings		20	6
Heavy Duty Mechanics		15	15
4. Semi-skilled craftsmen;			
Engineering Aids (Rodmen)		23	22
Fishing Lure Assemblers		15	15

	In Training	Trained	Placed
5. Service workers;			
Nurse Aids		27	27
Ward Attendants	12	34	34
Short Order Cooks	15	12	--
6. Agricultural field--to meet the need resulting from increased mechanization			
Farm Machinery Operators		10	10

Other occupations in Montana which frequently are in need of skilled workers include:

Auto Repairmen
Masons
Electricians
Electronic Technicians
Plumbing and Heating Specialists
Radio and TV Technicians
Practical Nurses
Service Station Attendants
Appliance Repairmen

A.R.A. and M.D.T.A., so far, have had but limited significance for the inexperienced youth, because of certain legislative restrictions.

Therefore, to expand the scope and level of vocational training programs for youth, congressional leaders are pointing towards early passage of the Youth Employment Act. This measure, backed by President Kennedy as an item of "first priority", would provide 65,000 jobs for youth on a nationwide basis in the first year of operation alone.

The first proposal contained in this act is the Youth Conservation Corps, which would provide 15,000 jobs nationwide, during the first year. Local area Youth Employment Programs would account for the difference of 50,000 jobs, mostly resulting from joint Federal-State participation. Here, we would also be in a better position to provide much greater and needed opportunities for vocational guidance as well as training.

Further, we believe that if vocational guidance and training facilities in our schools can be similarly strengthened and expanded, we can most certainly look ahead to greater satisfaction for the individual, more productive workers for employers, and better citizens for our society.

Because of what has transpired over the past several years, employment security agencies, as well as employers, have found that the unemployed and untrained worker is anxious to, and indeed capable of acquiring new skills through vocational training.

The unskilled unemployed workers, both youth and adult, can, through the medium of vocational training, more readily become steady wage earners, support and provide for families, and assume responsible places in the community.

TRADE, INDUSTRIAL, AND TECHNICAL EDUCATION IN MONTANA

W. Lyle Roeseler, Supervisor
Trade and Industrial Education
State Department of Public Instruction, Helena

Great Falls, May 7, 1963

Trade, Industrial and Technical Education is that part of the public school program, which offers high school students, post-high school students out-of-school youth, and adults, the opportunity to pursue the education and training in specific occupations, thus enabling them to enter employment with some basic skills in such occupations. It is particularly important to the majority of our young men and women, who graduate from high school, and who eventually make their living in such occupations.

In addition to preparing persons for entrance into such occupations in Trades and Industry, it also provides part-time and evening courses for people already employed, who wish or are required, to upgrade and improve themselves in their work. This is particularly important in Montana, where a shift in the labor force from predominantly agriculture, to more industrial is taking place.

To support the general welfare of the State, those persons who crop out of school, or those who graduate from high school, and immediately enter the labor market, must have some marketable skill in order to be employed as entrance workers in our modern society. No longer are jobs as common laborers, or semi-skilled workers available in sufficient quantity to absorb these people. Machines, automation, and new technology have created a demand for trained manpower that is not being met. More and more, it is essential to our State's manpower needs, that our young people and adults, be given the opportunity to gain basic skills, quickly and at a minimum cost in our public schools.

What have the schools been doing in the field? In the past twenty years, ending June 30, 1962, the public high schools have given pre-employment training in Auto Mechanics to 6,692 high school boys. This instruction is given in shops following regular commercial practice, with regular shop facilities, and by qualified journeymen mechanics. These are not hot rod schools. We would like to quote from a printed policy statement of a high school with an Auto Mechanics program signed by the Chairman of the Board and the Superintendent:

> "The School Shop is not a 'hot rod' shop. Jobs not listed in accepted flat rate manuals will not be permitted; examples--splitting manifolds, installing straight exhaust pipes, chassis lowering, 'souping up' engines. No student will be permitted to do any mechanical operation, which would violate any Federal, State, or Municipal Law."

Many of the young men from our schools are earning their living today as Auto Mechanics. Some even own their own garages. They will continue to provide real opportunities for young men, who have a real interest in becoming mechanics. There is no attempt in these schools to make journeymen mechanics. The sole purpose is to give young men opportunities for organized instruction, and supervised and directed actual working experiences, which are basic for entrance into employment. Shops are not competitive with local garages, and we know of no commercial garage in the past 40 years that failed because of local shop activity. In fact, many have profited materially from parts sales, and the employment of the graduates. In addition, some 435 post high school students have taken training in the same trade for a total of 7,127 youth. In 1946 there were 33,946,000 autos registered in the United States. It is estimated there will be over 93,946,000 registered in 1966. There will be jobs for Auto Mechanics in the future. Another 2,980 young men and women have received pre-employment training in occupations, such as machine shop, welding, electricity, diesel mechanics, cosmetology and air-frame and air-craft engine mechanics. A total of 3,175 young men and women have received training in a part time cooperative program carried on between the high schools, business and industry. In recent years 227 post high school adults have been enrolled in Practical Nurse Education, in preparation for licensure as Licensed Practical Nurses. Further, recently, in high schools some 226 youth, and in a department of one college, 170 youth, have received instruction in Electronics and Drafting Technologies, under the National Defense Education Act.

Yes, during the past twenty years, ending June 30, 1962, a total of 13,905 young men and women have received pre-employment training in the public schools of Montana. Most of these today are stable, self-supporting citizens, of this country contributing to its welfare.

But this is not all! Under skill improvement programs 11,485 adults have received organized instruction in our public schools in the improvement of their skill and knowledge as employed workers. In addition, 12,956 paid and volunteer firemen have received organized instruction in fire fighting. So, in the past twenty year period, 24,441 employed workers have been enrolled in the improvement of their skills in Trade, Industrial, and Technical Education programs of the public schools. These workers are materially supporting the general economic welfare of this state today.

Yes, we have been training youth and adults in Trade, Industrial, and Technical education in Montana, but not in sufficient quantities, to meet the needs of the present, let alone the future. This year only, approximately one percent of the high school youth will have an opportunity for such training though upwards of 50 percent of the students will eventually earn their living in the field. Some of our larger schools offer no opportunities for training in such occupations.

Now there is national concern over the trends in education, as evident everywhere in books, magazines, newspapers, and on the radio, and television programs. The lack of a sufficient number of skilled workers in the United States, and growing unemployment over the nation has focused much attention on Trade and Industrial and Technical Education. Apparently, we must look beyond State boundaries in the preparation of youth for jobs.

According to Dr. James R. Killiam, Chairman of the Massachusetts Institute of Technology, "More advances have been made in science in the past 50 years than in all preceding history, and ninety percent of the scientists whoever lived are probably alive today." A good proportion of these are in the United States. This explosive technology has shrunken the world. It has also spread over the world. Dr. John H. Furbay, International Education Director of the Trans World Airlines recently pointed out that the emerging people of Africa have made more progress technologically since World War II, than their ancestors did in 5,000 years, as the result of the elimination of isolation through the new modes of rapid communication, and travel and the introduction of technology based on education and business." New technological competition is changing the world. "Our economic growth, and our survival are dependant upon how individual educators assume the responsibility for the development of the programs, and human resources, which are required", and upon the public support to make such possible.

YES, MANY MONTANA YOUTH WILL GO BEYOND STATE BOUNDARIES FOR EMPLOYMENT. THE QUESTION IS, SHALL WE EDUCATE THEM HERE, OR SEND THEM OUT AS UNTRAINED LABORERS?

What should be done? It would seem there should be a hard working representative advisory citizen's committee on education in every local community. Educators will be unable to do the job alone. The best they can do is to help give direction to what has to be done. Mr. E. R. Volin, General Personnel Supervisor, New York Telephone Company, speaking at the Annual Convention of the American Technical Education Association, December 3, 1962, in Milwaukee, Wisconsin, said, "The success of any important effort depends on teamwork. With this thought in mind someone once said 'no one can whistle a symphony--it takes an orchestra to play it.' Industry and Education have always played well together. Today the quality of this cooperation is more important than ever."

The first job of this committee should be a study of the whole local community educational problem. Not too long ago, I heard Dr. Margaret Mead, the noted Anthropologist of New York City, say, "Before, children learned what the adults in that community knew, and now with press, radio and television, children know the whole human race on this planet has become one in its fate."

Yes, the new world of tomorrow means changes in education. But change is not new. Education has been in constant development throughout our history. The rapid acceleration of technological changes has created new problems. Certainly, it would be senseless to drop what we have. Our educational leaders have pointed the way in the past, and certainly they can give leadership to the needed improvements of the future. It will take a new look. This is where a committee can help.

Secondly, the committee should insist on a local occupational employment survey. This should involve the Employment Service, and as many other agencies as possible. These have been made in many local communities of the nation. In fact, one has been made of Deer Lodge County, by the Anaconda High School, in cooperation with the Montana State Employment Service. This provides much valuable information.

Third, the committee should study the literature available. This would include such reports as made by President Kennedy's Panel of Consultants on Vocational Education, "Education for a Changing World of Work". We are sure if they are interested in "School Dropouts", they will want to read the report, "Changing Demands on Education, and Their Fiscal Implications", by the National Committee for Support of the Public Schools.

Fourth, the committee should find out what other states are doing. Have you read, "When You Take the Brakes Off Learning", in the February 19, 1962 issue of U.S. News and World Report, or "A High School Where Every Kid Finds an Interest", by George W. Wormly, in the September 1962 issue of the Farm Journal. The drop out rate between 8th grade graduation, and high school graduation for the nation is approximately 30 percent. In Montana it is 27 percent. There are six states where it is less than 16 percent, and one of these six has a drop out of less than 8 percent. The committee should find out why the great difference. In some states it goes as high as 48 percent.

Fifth, the committee should determine what the community wants, needs, and will pay for in the way of improved education. Many times the community won't know. This calls for a plan of action to sell a program, and then following through to help with its direction.

Harry Bigelow, Employment Manager, Argonne National Laboratory, Argonne, Illinois, speaking to educators in Kansas City, Missouri, on December 4, 1961, on the topic, "The Need for Technical Education to Meet State and National Economic Security," said, "If you plan education solely along the traditional liberal arts cultural approach, our children are going to miss because the world may be away out like a satelite in orbit, by the time this generation of youngsters finishes school. "If we do not change our educational outlook to permit more opportunity for technical institute type of education, as changing times demand, we will be changed by default."

Changes in education are taking place, but not as rapidly and as well directed as they could be. It was to this point Frank B. Lindsay, Chief, Bureau of Secondary Education of California, on March 14, 1963, referred when speaking at San Francisco in a symposium on "Occupational Training in High School". He said: "It is my purpose to call to your attention the large group of students in our high schools who all too often seem to be invisible, since our deliberations about curriculum fail to take their needs and aspirations into account. They are not the 'gifted' upon whom abundant care has recently been lavished; nor are they the disadvantaged, 'culturally deprived,' and disinclined who are topics of much discussion though rarely made provision for. No, the invisible students are the high schools' great majority, who are scheduled willy-nilly into our straight-jacketed curricula without regard for their desired or probable occupational life careers." He continues later as follows: "A fundamental defect in American public education has been the separation of studies into two opposing groups: Academic and vocational. This situation has been further confused by grouping curricula into college--preparatory and terminal. The real test of any learning is; does it provide students with new varieties of behavior. Words are nothing in the context of life. A study of English in high school should produce students who can express themselves orally and in writing with clarity, conciseness and conviction; otherwise it has failed to improve their behavior. Unless they learn habits of thinking which enable them to make decisions as citizens of their communities, English remains a veneer which conceals impaired maturity.

When will the comprehensive high school face its responsibilities and talk back to the self-styled authorities in some so-called high institutions? The purpose of academic studies is not to prepare for college admission; it is to put young people into possession of the discoveries human beings have made throughout the ages as to their collective and individual potentialities. No one should be allowed to graduate from high school who has not achieved dexterity in one or more areas of business and technology as well as awareness of the political and economic institutions which preserve this republic.

It is time for thoughtful educators to take our case to the people. After Sputnik there was a great flurry over mathematics and science. That was good since teachers of mathematics and science had sometimes secreted their subjects in erudite language, like flies in amber, so that only students who conformed to their ritual could become informed of their contents. Then the School Mathematics Study Group as an example broke out of shackling tradition and showed that youngsters can discover and master mathematical truths at almost any age if only they are presented with simplicity. But let us not forget; no mathematician, chemist, or physicist can build an airplane, or harness nuclear energy. Only people who handle materials and skillfully use machines can make realities out of ideas. Space will be probed and maybe conquered, not by armchair speculators, but by artisans who take meticulous account of all biological and physical factors and build craft to transport men to the moon or Mars.

If high school is not to become obsolete, it must transform instruction in three principle ways. First, knowledge must be broken out of academic compartments, and inter-connected as well as rigorously pruned down to essentials. Items must be drawn as needed from any subject field, and organized into intelligible sequence. Second, programmed learning, flexible scheduling, team teaching, and utilization of audio-visual materials must be open-mindedly scrutinized and tested, and finally substituted for books alone. And third, classrooms and shops must lead students out into the whole world of work. Pride of craftsmanship must be extended to spelling and composition, as an illustration, with sloven thinking and expression not tolerated. Likewise, the same students must be confronted with manual and machine jobs to do and be made proficient in some skills of laboratory, business office, and shop alike. High school students are young adults, inexperienced to be sure, but they deserve to be challenged face to face in adult fashion and held to standards of workmanship.

In summary, I have tried to give you a brief description of trade, industrial and technical education in Montana. I have pointed out the necessity for improvements to meet the future. I have suggested a plan of action through team work involving many groups in the community and the schools. You in the local communities hold the keys to the future of America. As Abraham Lincoln once said, "In this and like communities, public sentiment is everything. With public sentiment, nothing can fail; without it, nothing can succeed. Consequently, he who molds public sentiment goes deeper than he who enacts statutes, or pronounces decisions. He makes statutes and decisions possible or impossible to be executed."

A representative group working cooperatively as a team can mold public sentiment in the community to improve education. Then, no one individual will have to try and "whistle a symphony" The orchestra of many individuals in enlightened unity will play this challenging new symphony--and play it well.

VOCATIONAL AND TECHNICAL EDUCATION NEEDS OF MONTANA REHABILITATION CLIENTS

Vocational Educational Panel of Consultants
Great Falls, Montana--May 7, 1963
by
John J. Earls, Supervisor of Field Services
State of Montana, Bureau of Vocational Rehabilitation
Helena, Montana

It is with great pleasure that I represent the Division of Vocational Rehabilitation on this panel today, discussing as my topic, Vocational and Technical Education Needs of Rehabilitation Clients in Montana. This particular subject is dear to the hearts of all rehabilitation workers in our state, since it is our responsibility to counsel and advise those with physical disabilities and consequent vocational handicaps along possible and probable vocational lines that will enable them to most adequately take their place in our society as wage earners, tax payers and contributors to the common good. Because of these responsibilities, our division has become acutely aware of most of the training needs in the state through all grades from professional on down to the elemental, and I believe I can truthfully say, that of all our educational needs, that in the vocational and technical fields is by far the greatest. I, of course, do not purport to speak for the general needs of our educational systems or even the need of the general population for vocational and technical education, but I can speak authoritatively for that segment of our population whom we call the physically handicapped. Other members of the panel, I know, will discuss at length the general needs of Montana and what will be done to satisfy these needs.

In preparation for my paper today I have made a study of the training status of the clients we currently have on our roles within our division. These are clients enrolled under the program this fiscal year. I think that these statistics in themselves go a long way in pointing out our needs in this segment of the training field. Our rehabilitation clients are representatives of the general population, and the statistics applicable to them would also be applicable to the general population, since disability confines itself to no class, no type or no particular group of people. I find that for the current fiscal year our division has authorized training for 563 disabled individuals. Of these 563, 395 or 70.1 percent were enrolled in colleges and universities. Actually we consider these people as being trained in the professions. However, later on I will touch on statistics from Northern Montana College at Havre which will tend to belie this statement. At any rate, this leaves a total of 168 of these 563 people or 29.9 percent enrolled in other than college training courses. A further breakdown of this indicates that the next highest number of trainees are oddly enough in the business colleges of our state. There is a total of 74 such enrollments for this fiscal year or 13.1 percent of this total. Breaking vocational training down further, we find that all other miscellaneous trades from barber and beauty work down to welding, sheet metal, auto mechanics, refrigeration and air-conditioning, etc., total 82 out of 563 students for a percentage of 14.5. Going on further we find that on-the-job training and correspondence training in the trades amounts to only 12 clients or a percentage of 2.1.

A cursory glance at these statistics show that we are almost 3 to 1 preponderantly training college students in the Vocational Rehabilitation program. As compared with other states in our region and in the nation, this is an extremely high percentage of college students for a program such as ours. However, we feel we have been forced to utilize our college resources because of the great lack of vocational and technical facilities for our people within the state. This in fact forces our counselors to steer our clients into college courses even on the gamble that they may not be college caliber and thus be able to successfully complete a college program because there is no other place to put them or way that we can train them. This has been the feeling of all of our counselors for a long period of time. Another interesting statistic shown from these figures is that of the 74 business college enrollees, 13 of them are our of state trainees, and of the 82 trade and technical trainees, 60 are enrolled in out of state schools. You may be interested in the names of some of the trade schools we utilize. The one most often used, of course, is the Spokane Technical and Vocational School in Spokane; we use the Hanson Mechanical Institute in Fargo, North Dakota; Coyne Electric in Chicago; Bulova School of Watchmaking in New York; National Technical Schools in Los Angeles; Greer Shop Training in Chicago; The National School of Meatcutting in Toledo, Ohio, and many others which are available to us in Salt Lake City, Denver, and other large cities throughout the Midwest.

It is interesting to note that we subscribe to the Vocational Training Directory of the United States and the only vocational school listed in this Directory for Montana at the present time in the Mechanical-Technical Miscellaneous division, is the Western College of Auctioneering in Billings.[1] The only other Montana trade schools listed are in x-ray, nursing, business college, and oddly enough, flying, in our state.[2] From these figures, I believe it is readily seen that we in the rehabilitation field are forced to utilize out of state schools for the majority of our trade and technical training, because of a lack of such within the state.

Now on the other side of the ledger we do have some good resources in Montana and I would not do justice to my subject if I were not to mention them and to pay them their just due. First of all and most important to us in rehabilitation, is the technical and trade courses at Northern Montana College. To show you how much we utilize these, I can report that of the 76 enrollments we have had this year at Northern Montana College, 39 of them were enrolled in the Vocational-Technical Division of the college. I noticed that Dr. Kjos who is the Director of the Vocational-Technical Division at Northern was a panel speaker at the meeting preceding this held on April 16th in Billings. I am sure that he explained his program in its entirety, and for those interested, I suggest that they look into this wonderful facility.

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[1] Editors note--there are others. LLK

[2] Editors note--incomplete listing. LLK

Our division became aware of the advantages of this aspect of the Havre School back in 1960 when we had one of our Quarterly Staff Conferences on the campus of the college at Northern. At that time, our entire professional staff toured the college where we observed first hand the trade and technical facilities and the courses offered there. As a direct result of our visit our counselors were instrumental in sending more and more of our clients to this school. In speaking of this aspect of Northern's curriculum, I am reminded of the way it was told to us when we were there; that it is the objective of Northern in making these trade courses available to Montana students to build leaders in the various trades and trade areas taught. In addition to giving sound, basic instruction in such trades, the students are also trained in other college subjects on the college level which enables them to become leaders in the trade they have chosen. This to my mind, is good, sound, common sense. In addition to Northern's Vocational training program, we as a training agency have utilized the services of the Helena Aeronautical School, which, of course, operates in connection with the Helena School System. Since Mr. Giles Russell is also on this panel, I am sure he will give us a rundown on the various trade courses offered at his institution. We have utilized his facility to the fullest extent possible, and over the years he has trained many of our people in aircraft and engine mechanics, radio, welding, etc. We, of course, patronize all of our state business colleges, beauty schools and the like. I am happy to report a new training facility in Handicapped, Inc., Montana's only sheltered workshop which is the "brain child" of Dr. Louis Allard, our famed Billings Orthopedist. This institution, Handicapped, Inc., though set up primarily as a sheltered workshop for the employment of the handicapped was assisted by our division in obtaining some equipment. Working closely with the officials in this organization, our division has established basic training courses at their workshop offering instruction in upholstery, electrical appliance repair, woodworking and furniture repair and machine knitting and weaving. Such courses have been offered to our handicapped clients from all over the state. It is contemplated that as their facilities improve and qualified teaching staff are recruited, courses in lapidary work, radio and T.V., possibly some bench mechanical work and other trades will be set up. This could develop into a good vocational education recourses for Montana. Outside of these facilities, our counselors have been trained to seek out, look for and use any other vocational resource that they may come across in their travels. It is interesting to see some of the things that we have come up with. For example, there is a highly skilled and qualified lapidarist in Butte in the person of a gentleman who operates a tombstone business. We have utilized loom weavers throughout the state to teach others on a tutorial basis. We have set our people up as trainees in dental laboratories throughout the state, lens grinding laboratories, artificial limb and brace shops, speedometer repair shops, radio and T.V. repair shops. We have located a manufacturing concern in Missoula which manufactures dental tools, the scrapers we know so well from first hald experience. We have found a trailer factory in Kalispell where many trades are utilized in the manufacture of small camp trailers. We have set our clients up in courses in gun smithing on a tutorial basis. We have used high school, adult vocational courses. We have utilized on-the-job training situations in printing trades, x-ray laboratories, diet kitchens, shoe repair, body and fender work and lumber grading. We feel that our counselors are aware of and try to keep their finger on any type of technical or vocational training that may show up within the state, but with all this we can easily see there is a great lack of systematized accredited trade training for our people.

Perhaps one of the answers to our obtaining better vocational and technical training might lie in the attraction of industry to Montana which is the avowed objective of many of our civic organizations. It is true our economy of agriculture, mining and lumbering does not lend itself readily to the creation of large vocational trade training facilities. Maybe if and when we ever do get manufacturing interested in Montana as a necessary correlary to that will come the trade training that we here so earnestly want. However, the need for establishment of future facilities may in itself bring industry to the state. We all know that labor is most important in attracting industry to invest in any locality. This in itself could be a good incentive for building adequate trade training facilities. We have all in Montana been proud of the statement that we regard our state as the last frontier for hunting, fishing, camping and the like. I believe we should not be so happy to be known as the last frontier of vocational and technical training. We should do something about this situation.

I thank you for the opportunity to appear before you and tell you something about what we in rehabilitation feel are our needs in vocational education.

VOCATIONAL-TECHNICAL EDUCATION
IN THE HELENA SENIOR HIGH SCHOOL
AERONAUTICS DEPARTMENT

by
Giles Russell, Director
May 7, 1963
Great Falls, Panel of Consultants
On Vocational and Technical Education

The history of the Aeronautics department of the Helena Senior High School has been one of adjustment and change, from its beginning in 1931, to the present. Today we face the necessity for more adjustment, with the path ahead more dimly defined than ever before. The mobility of our population, the uncertainty of the knowledge and skills that will be required, the urgency brought on by automation--all require some careful investigation and planning.

The beginning of the school dates back to the demand for aircraft and engine mechanics. Industrial arts, as taught at that time, did not help much in preparing young men to repair airplanes. Since mechanics were sorely needed, "Red" Morrison and "Bill" Fahrner, the Helena School Board, State Department of Public Instruction, and other Helena leaders, promoted the idea of a separate school to train aviation mechanics. This was a radical change, from the usual industrial arts training to the direct trades training.

The next big change came with World War II, when Mr. Fahrner was confronted with the necessity of operating an around-the-clock school for war-production workers and pilots. In this short period, 4300 people were trained for special war production jobs, and maintenance was provided for the planes of a Navy pilot-training program.

Following the ceasation of hostilities, with high school enrollment gone, the school engaged in three years of training for returned veterans, under the G.I. bills. Auto mechanics, radio repairmen, A and E mechanics, machinists and welders were trained at government expense and sent into the labor market. Meanwhile, the high school classes were gradually built up, and by the time the G.I. peak was past, the school was back to its intended use. TODAY WE ARE BEGINNING TO BULGE AT THE SEAMS, WITH PROSPECTS FOR INCREASED VOCATIONAL AND TECHNICAL TRAINING LOOMING AHEAD. SO MUCH FOR THE HISTORY OF THE SCHOOL--WHAT OF TODAY, AND THE FUTURE?

To begin correctly, I want to say I do not pose as an authority on vocational education. I am the principal of what I consider a good vocational department of a high school. I took over at the low point in high school enrollment.

We have studied the trends, practices and results of our school and other like-schools, and have adjusted our curriculum to what we consider our best interpretation of what is needed to meet the requirements of present day training for our young people. We can prepare for the skills and knowledge required in present-day occupations and technical jobs, but, as to preparing for positions not yet in existence--we can only guess as to what will be required.

The most important ingredient of a good training institution is the student. We believe that he must have a good foundation in academic education, as a pre-requisite for success in vocational work. A reasonable command of the English language, both written and spoken, a familiarity with, and reasonable working knowledge of math and science, are needed for success in any responsible job in the vocational or technical fields. The fact that the student has mastered these fundamentals, means that he has a quality that keeps him striving. In general, we can predict a good chance for this boy to succeed.

Another boy, for whom we have hopes, is the one who has not "sparked" during his grade and high school life, because he just didn't see any reason for learning the subjects in the usual curriculum. In vocational work he may find some reasons--for algebra, as one example, when he is attempting to find the voltage or resistance in a simple electrical circuit, or, maybe when trying to figure the advantage of a gear, or pulley ratio. We have had instances where a student changed completely in his attitude, after seeing practical application of his classwork.

Now, we must leave a loophole for the boy who has nothing in an academic way, but has shown some mechanical "savvy", and is willing to apply himself to learning a trade. Manual skills, such as welding, can often put him in the employable group, even though this field is necessarily limited.

There still remains the group of potential drop-outs, that can be found in most high schools. Many have failed to master the academic subjects, even when in the lower grades. Each year has added to the feeling that they are below par, and the time is rapidly approaching when they must earn a living. The least hint of a short-term or part-time job is an excuse to get away from the frustrations they are enduring. Seattle public schools have had some success with putting these students into remedial classes, where the subjects were geared, in speed and difficulty to their actual abilities. In small classes, their progress has been worth the effort, although success was far from 100 percent.

I won't attempt to prescribe for schools in general, but will tell some of what we are doing. We are trying to meet present-day needs, and to anticipate the future trends.

We offer Airframes and Powerplants courses to high school juniors, seniors, post-graduates and adults. These courses lead directly into the trade of repairing, rebuilding and maintaining aircraft. All aircraft must be re-licensed at regular periods, and this inspection and repair must be done by a licensed A and P mechanic. Montana needs these mechanics today and will for some time to come. Quite a number of our graduates have gone on to complete a degree in aeronautical, electrical or mechanical engineering. Most of them, however, upon their graduation, go directly into the trade. Classwork is largely a review of math and science as applied to hydraulics, aerodynamics, weight and balance, etc. This practical application of those principles makes the course meaningful. Flight training, to solo, is also offered.

Our electronics course has been revised yearly over the past 20 years. Originally, it consisted of repair of radio equipment. Today, we begin with an intensive study of the fundamentals of electricity, stressing the mathematics involved. The course requires a study of the electron in its many uses in communication, automation, and the other various fields. No specialization is attempted, but a broad base of the fundamentals is set up. The construction and use of motors and other testing devices, are stressed.

The building trades offer a field of employment for years to come. We take students through the construction of a complete dwelling, each two years--from foundation to cabinet work. A journeyman carpenter supervises the classes, and craftsmen are brought in for each phase of the construction. A journeyman plumber supervises the plumbing, with students acting as apprentices. The same procedure is followed for the electrical wiring, sheet metal, taping, etc. In June we will have our second 3-bedroom home ready for sale, the money to be returned to the fund to start another project in September. This course was set up with the advice and cooperation of all unions involved. They have continued to assist in its operation.

Next comes the auto mechanics class. It appears there will be a need for good automobile mechanics for some time to come. It is true that not all the boys taking the course will enter the trade, but it is almost certain that all will own and operate a car. Our course requires that each student completely overhaul an engine in the first semester. All tolerances are checked accurately, and new, standard parts put in where needed. The engine is tuned up to its maximum efficiency before being released. This is followed by similar units in transmission and differential overhaul, steering, brakes, body and all other units. No "souping up", lowering of spring shackles, nor loud exhaust systems are permitted. It is true that in the earlier days of auto mechanics classes this type of work was allowed, but at present, at least in the T & I shops, this is not the case...The Chrysler Tune-up contest has proved to be a good incentive for auto mechanics classes. Helena didn't win last year, but the contest did set up goals for good, clean, fast and efficient motor-check, which gives added meaning to the classroom and shop training.

Welding is a tool of many trades and promises to continue in importance for several years. It is required of carpenters and plumbers' apprentices, aircraft workers, heavy equipment repairmen and many other crafts. New methods are being introduced, such as inert gas, semi-automatic, etc., in addition to the traditional manual-operation, with arc and oxy-acetylene equipment. Helena offers arc and gas welding, and a limited amount of heliarc. We hope to add equipment for 1963-64.

The course for heavy equipment mechanics consists of one semester of diesel engines, 12 weeks of machine shop and 6 weeks of welding. It prepares a student to enter apprenticeship for heavy equipment repairmen. It is also a good course for farm boys, since diesel power is becoming widespread, even in small tractors.

Providing INSTRUCTORS is a difficult problem. We consider the first requirement is that the instructor be recognized by the trade as a good craftsman in his field. To meet the T & I requirements he must have a journeymans card, and have worked successfully at the trade for 4 years. To meet these standards requires 11 or 12 years of study and training. In addition, A & P instructors must have a license with the Federal Aviation Agency, which takes 2 years of time and study, and he must have an instructor's license. Meanwhile, industry is posing a strong attraction for men with these qualifications.

We have asked that the instructor meet the knowledge and experience qualifications first, that he be able to understand and teach high school students, and that he continue his education in summers as rapidly as possible, if he is not already qualified educationally. Also, we are considering a two months return to the trade at regular intervals to keep the instructor informed of new methods being used.

With the exception of A & P courses, all of the training we offer is of a pre-apprenticeship nature. However, a good student, upon completing his probation period, is almost always given credit toward his apprenticeship time for the hours he spent in the high school trades classes.

ADULT TRAINING. The Helena High School conducts extensive training at the high school building for the usual adult classes. At the Aeronautics School we offer classes in electronics, welding, and machine shop, and related instruction for apprenticed carpenters and plumbers. These classes are taught by journeymen from the trades involved. Course content is set up by consultation with the Joint Apprenticeship Council. We have an ADVISORY COMMITTEE made up of business and professional men, and persons recognized as being successful in the various trades being taught at the school. This committee meets once a month, and has been of great assistance in planning course content, and in keeping courses up-to-date.

WHERE do students go upon graduation? A session in some branch of the service claims a few years from most boys after high school. Aeronautics, electronics, welding and auto mechanics students often find themselves in preferred positions following boot camp. Others go on to college, graduating in aeronautical, electrical or mechanical engineering. Our graduates can be found in responsible positions at Boeing and Cape Canaveral; as owners of body shops, aircraft repair shops and electronic maintenance companies; as supervisors on the Minute Man project, etc. **GOOD VOCATIONAL AND TECHNICAL KNOW-HOW HAVE PROVED SALABLE.**

MISSOULA COUNTY HIGH SCHOOL
VOCATIONAL AND PRACTICAL ARTS
PROGRAM FOR YOUTH AND ADULTS

by
Benjamin A. Ulmer, Director
Adult and Industrial Education
Missoula Area Vocational
Panel of Consultants
Florence Hotel
Missoula, Montana
May 9, 1963

This report concerns itself with the vocational, technical and practical arts programs for youth and adults as they have been developed at Missoula County High School over the past recent few years. While there are other vocational areas in the high school, this paper deals mostly with the development, growth, and philosophy of the industrial education and adult education phases of training and programs. However, the school also has fine programs in distributive education, home economics, and business education.

The Industrial Education Department as well as the Department of Adult Education, as they are currently organized and administered, are rather new. The current Industrial Education Department was organized in 1956, while a coordinated adult education program was organized in 1959. These new organizations came into being concurrently with the construction of the South Avenue unit of Missoula County High School. The new high school provided facilities, which made it possible to offer a much broader course offering in the area of vocational, technical and industrial education.

Before this unit of the school was built, much research was done to determine the educational needs for all groups of people of the community. Experts were called in to make surveys concerning Missoula and its future. Criteria for planning included: Community growth, wealth, possible future development, school growth, industrial growth, and educational needs for a community of this type. All surveys and research showed that Missoula could best be served by a secondary school system offering a broad comprehensive program that would meet the basic needs of youth and adults for all areas of the community. With this basis then, the current comprehensive program was adopted for Missoula County High School.

I. INDUSTRIAL EDUCATION DEPARTMENT

The current Industrial Education Department was developed to include some of the basic units offered in a modern comprehensive school. After two years in operation, this department was evaluated and a report written in 1959.

The department at Missoula County High School is unique in that it is composed of three areas of curricula. These three areas are industrial arts, vocational agriculture, and trade and industrial education. While each of these three areas have a somewhat different philosophy for being and make a somewhat different contribution to education, in many respects they are similar. The fact that these areas may be advantageously correlated, one with the other, makes it advantageous in many respects to have them together in one department and under one department chairman. Better understanding of each others subjects and philosophies has resulted from the fact that teachers of the department must work together in the best interests of the students. Department meetings, which are held once a month, have resulted in much fruitful discussion concerning the three areas. The utilization of the building and equipment can be done to the best advantage under this system, since some equipment and facilities may be used by any or all of the three areas.

The department is so organized, so that representatives from each area as well as all the teachers of the department work together with the department chairman to work out problems, policy suggestions, curricula, finance, requisitions, and other administrative details. These are then presented to the administration of the high school.

A. Laboratories

Laboratories and classrooms are provided at the South Avenue building in the areas of the woodshop, metal shop, welding shop, auto mechanics shop, vocational agriculture, and drafting. Woodcraft, drafting, driver training, and vocational agriculture laboratories are provided at the higgins Avenue building.

Current national surveys point out that in the larger high schools with a greater breadth of offerings of industrial education in their courses of study, the number of students enrolling in industrial education courses increases. If we are able to provide adequate shop programs, which offer a variety of subjects, we attract more students at all ability levels. After broadening the vocational course offerings at M.C.H.S. the enrollment in the department more than doubled in two years. Many schools do not meet the vocational needs and have low enrollments because they have too few course offerings and inadequate and obsolete laboratory facilities. It is impossible to interest students in using obsolete "horse and buggy" equipment in a highly technological atomic age. We must realize that we are educating students who will only be middle aged at the beginning of the twenty-first century. At best, this education will be extremely inadequate unless we have the foresight and insight to meet this challenge. The Adult Education Division of the United States Department of Health, Education, and Welfare, says that most students finishing formal education will need to be retrained at least three more times beyond their original formal education. This can be done most effectively when this training is based upon a sound comprehensive basic background achieved during the students' years of formal education. Industrial education shops should be "laboratories of industry and agriculture," where they become laboratories for learning, experimenting and developing basic skills. Modern tradesmen, businessmen, farmers and homemakers must possess much knowledge concerning their field.

Just developing basic skills is not enough to be successful in these areas. Perhaps the term "shop" should be dropped from the educational vocabulary and the word "laboratory" substituted in its place, just as we dropped the term "manual training" in favor of the broader term "industrial arts" some thirty years ago. Perhaps, too, the term "industrial education" should now be changed to "industrial science and technology" to encompass the entire area of knowledge and skills now being taught. At any rate, these areas of learning must be under constant evaluation and equipment, techniques and curricula must be brought up to date constantly in order to keep up with the trends of an industrial society.

B. The Student

In an educational system the student is the most important individual to consider when planning and implementing education that will ultimately result beneficially to both himself and the society in which he lives.

A survey was conducted among a large percentage of the Missoula County students enrolled in industrial arts in the year 1959 to ascertain to some extent the type of student that is enrolled in this field as well as some degree of success in meeting the expressed needs and desires of these students. While not all the students filled out questionnaires, a large percentage were surveyed with no attempt made to survey any particular class or area of the field. It is felt that a good cross section was surveyed. Two hundred sixty-five students were asked to fill out questionnaires concerning their educational status and future plans.

Some of the results of the survey concerning students are summarized below:

1.	Honor roll students.	32 or 12%
2.	Number planning to attend college.	130 or 49%
3.	Number planning to attend trade school . . .	42 or 16%
4.	Number planning to attend special schools. .	35 or 13%
5.	Plan to enter the labor field as technicians, specialists, skilled or semi-skilled laborers	105 or 40%
6.	Plan to go into business	48 or 18%
7.	Plan to go into agriculture.	24 or 9%
8.	A small percentage indicated preference for some other field of endeavor or occupation	

The students were also asked to indicate their preference for enrolling in the following industrial courses if they were to be offered at the high school in the future. The courses with the expressed preferences are shown below:

1.	Machine shop.	83 or 31%
2.	Electronics & electricity	108 or 40%
3.	Industrial mathematics.	58 or 22%
4.	Driver training	113 or 43%
5.	Pre-engineering drafting.	96 or 36%
6.	Diesel & heavy equipment.	107 or 40%
7.	Aeronautics	96 or 36%

In checking enrollment records and surveying the occupational achievements of former agriculture students for the past ten years, we find the following facts to be evident:

1.	Engaged in farming	18%
2.	In related agricultural fields	28%
3.	In military service	18%
4.	In higher education	12%
5.	In occupation not related to agriculture	14%
6.	Whereabouts unknown	10%

From these figures we feel that our work in selecting students is beneficial and our vocational agriculture course is catering to the students who desire and need agricultural training. Nearly 50 percent of these former students are now working in agricultural fields, while a good percentage are attending colleges or are in the military services.

A survey concerning 60 graduates of the Trades and Industrial program revealed the following concerning their status after graduation from high school:

1.	Engaged in mechanical or related trade	16%
2.	In higher education	35%
3.	In other occupations	12%
4.	In military service	24%
5.	No record	12%

The survey brought out certain other facts that might be pertinent in future planning.

1. A much greater percentage of students from the freshman class showed a preference for driver training than did upper classmen.
2. A somewhat higher percentage of students enrolled in drafting were on the honor roll than those enrolled in shop classes. This difference was very slight, however.
3. The survey shows that the enrollment included students from every grade school in the city of Missoula with no appreciable difference in the number enrolled from any one school.
4. Fifteen percent attended grade school outside the city of Missoula but did attend grade school in Montana.
5. Slightly less than ten percent attended grade school outside the state of Montana
6. Seven percent attended a parochial elementary school in Missoula.

While these answers as indicated by the students are merely expressed desires and since many of the students surveyed were only freshmen and sophomores, it might be concluded that many of these desires and aspirations would change through the coming years. It might also be concluded that with an honor roll group of 12%, this may show somewhat of an inconsistency in that almost 50% of the students wish to attend college. Judging from the future plans, a majority of these students have indicated they are enrolled in industrial arts for the purpose of general education rather than the purpose of developing a trade. More specialization, however, is evident in the junior and senior year since a higher percentage of these upper class students plan to enter industrial, vocational or related fields.

While many of the students who graduated from the industrial arts area have entered the service, it was found that others have gone on to college, trade schools, entered into business, and are working at various trade fields.

C. Guidance and Counseling

It is generally assumed by most teachers that guidance personnel spend all their energies on college bound students and on insignificant routine matters of discipline, attendance and record keeping. In a recent interview with a member of the Guidance Department of Missoula County High School, certain pertinent facts were brought out. The members of the Guidance Department of the school feel they spend about 40 percent of their time on vocational guidance. This guidance consists of private and individual consultation, testing and providing speakers and arranging panel discussions, which represent various occupations and fields of endeavor. The professions, trades, services, industry and management have all been invited to acquaint students with opportunities available in each field. The Guidance Department has also compiled much literature concerning job opportunities as well as information relevant to trade and vocational schools. Missoula County High School is rather unique in that it has a relatively low drop out rate and a very high percentage of its graduates going on to college. Many of the students entering college, however, will not finish a four year college curriculum, but will receive some education beyond high school. The Industrial Education Department also provides career information, college information and vocational guidance services for students of the department.

D. The Curriculum in Vocational and Technical Education

The current industrial arts and vocational education curriculum is based upon many factors which were established after considerable research of course offerings in other school systems of similar size and type. The industrial development and potential of the area was also considered and projection for the future was made. One must bear in mind, that to educate students for the occupational needs of the immediate area of community, however, is a rather near sighted and inadequate approach. Society has become rather mobile and many of our graduates will not remain to live in their home community. The curriculum should provide courses that will result in the development of basic skills and knowledge that can be used as a background for future training and development where ever the individual may choose to live or whatever he chooses to do as his life's work. Due to the rapid change in technological knowledge and skills, the curriculum for vocational education should remain flexible and appropriate so that it will continue to serve the needs of all student groups.

I wish to list three classes of students to be served by Industrial Education programs:

1. The mechanically-minded student who needs a strong background in industrial education for business enterprises related to mechanics or apprenticeship in mechanical trades, or technical courses after high school to prepare for a vocation in manufacturing, construction, transportation, graphic arts, communications, or power industries.

2. The college preparatory student who needs the basics in drafting, electricity, and tool machine processes as a foundation for engineering and other scientific professions.
3. The student with only a casual interest in things industrial and scientific, who wishes this training to be part of his general education to prepare him to understand and to intelligently live in an industrial and technological society.

Industrial education courses of Missoula County High School are established in a manner to allow freshmen and sophomores to explore various industrial fields. This exploratory type training is also available to students of the seventh and eighth grades of the Missoula Elementary School System. Vocational agriculture is also taught on this level. Juniors and seniors are given an opportunity to enroll in more advanced courses, which give them an opportunity to do more specializing. Freshmen and sophomores may receive training in the areas of drafting, woodcraft, vocational agriculture, and driver training. Juniors and seniors may enroll in courses in advanced woodcraft, welding, metal craft, architectural and industrial drafting, auto mechanics, and vocational agriculture. Auto mechanics and vocational agriculture are vocational courses, while the other industrial courses are offered through the industrial arts area.

II. ADULT EDUCATION IN VOCATIONAL AND TECHNICAL AREAS

The current Adult Education Department of Missoula County High School is relatively new having begun in 1957. The current coordinated program was placed under a director in 1959. The adult education programs were originally offered by a few teachers who offered courses in welding and business education. Since that time, the enrollment has climbed steadily from 233 adult students to about 1000 adults who received formal instruction during this past year. Adult education is a big venture nation wide, and Missoula is no exception to this trend.

This past year we have seen 1000 adult students receiving instruction in 62 classes, taught by a faculty of 35 teachers. While most subjects offered are of the practical arts type in nature, the curriculum did include some general education courses. Due to an increase in the demand for more education on the adult level, a spring term was added to the current adult school term. Courses offered fall under the following categories:

A. Business Education
    Typing
    Shorthand
    Bookkeeping
    Office Practice

B. Language
    Spanish
    Russian
    German

C. Home Economics
    Beginning Sewing
    Intermediate Sewing
    Tailoring
    Millinery

D. Nursing
    L.P.N. Training
    Nursing Home Attendants
    Missoula School of Practical Nursing

We have three adult groups receiving day trade training through the Adult Education Department of the high school. The Missoula School of Practical Nursing is a joint venture of the State Department, the three hospitals of Missoula, and the high school. We will graduate our third class of practical nurses this summer. This program serves a real need for this community and Western Montana. Most graduates have remained to work in Missoula and thus far we have not kept up with the need for nurses. In addition to the day class at the nursing school, we have sponsored extension classes for licenses practical nurses, registered nurses, and nursing home attendants. Much more training needs to be done in these areas since new knowledge is being discovered in ever increasing amounts and these groups need to keep abreast of the field.

Two classes under the M.D.T.A. (Manpower Development and Training Act) are also administered through the adult education program. A class for lumber graders has finished training and most members of the class are now currently employed. The class in forestry engineering aides will continue to receive instruction next year.

I wish to present some observations I have made about adult education while teaching adults and administering an adult education program over the past four years. These observations seem to parallel those of a national committee, which made a study and wrote a publication entitled, "A Study of the Educational Pursuits of American Adults".

1. Adult education is wide spread over the United States. Some communities have had adult programs for over 35 years. Currently there are almost 30 million adults enrolled in full time and part time adult education programs throughout the country.
2. Many adults receiving training do so in order to better their position or to remain employed. However, too few of the hard care unemployed under-educated are reached.
3. The more education one has, the more likely it is that one will engage in additional learning experiences. Most adult students have had at least a high school education and many of them take courses for several years.
4. Post school educational energies of Missoula adults are directed primarily to vocational and practical arts courses.
5. Type of adult student--more often a she than a he. Under forty, has completed high school or better, married, works full or part time, average or above average income.
6. Unemployment rates--have a close though inverse relationship to the level of education. With each step up the educational ladder, the rate of employment leaps significantly. Jobs are available in Missoula for the skilled and semi-skilled.
7. Educators think of adult education as a vital part of the overall school system. They understand and assume that this, too, is their responsibility. New ways of reaching and motivating the undereducated adult must be found.
8. There is a marked drop in the percentage of drop outs and absenteeism.

In summing up this report we might ask ourselves, "Just what does all this mean and how does it affect this community?" Upon inspecting the industrial education laboratories and evaluating the industrial education laboratories and evaluating the industrial education programs, one might get the impression that this represents an adequate program for this community. Programs of this nature cannot stand still, however. We cannot afford to be satisfied with a program that seemed adequate even as late as five years ago. Technical knowledge is increasing rapidly and skills and job opportunities are changing continuously. The curriculum for industrial arts, trade and industrial education and vocational agriculture are set up so that students are able to gain basic knowledge and skills, some of which are saleable in the world of work. Perhaps new areas of training should be established in the industrial arts area while the vocational agriculture program should be broadened to include training in agri-business and in fields related to farming. There are many opportunities available to students of agriculture in related agricultural positions.

We might ask ourselves again, "Is this type of training necessary in a university town?" The answer to this question is "Yes!" While a larger percentage of our students do go on to college, many of them do not receive four years of college education. Many high school students also enter other colleges of the state and some enter colleges located in other states, which are not liberal arts in nature. Many high school graduates are not interested in a liberal arts college or would be happy or satisfied receiving this type of education. Others are not suited for it.

We must be alert and keep our education alive and sensitive to the many social, economic, and employment changes of our times. We must educate our youth for a changing world of work. Twenty-six million young workers will start work between 1960-70. Their aptitudes, skills, and education must match the needs of a changing economy. Three million women will switch from home work to jobs between 1960-70. These wives, mothers, and widows will also need marketable skills in the decade ahead. Ten percent of all draftsmen in industry are women; yet, we neglect to offer drafting to girls in most of our high schools in the state.

Out of every ten youngsters now in grade schools in the nation, only two will finish four years of college. How will the other eight fare in the changing world of work? The secondary schools of Montana must also provide more sound, purposeful vocational education to its youth. Existing programs must be broadened since we are not preparing students for enough types of jobs. Statistics show that we do not have enough trained personnel to fill existing jobs, while at the same time many people remain unemployed. Seymour L. Walfhein, Deputy Assistant Secretary in the Labor Department recently stated: "Unemployment from now on will result almost entirely from lack of skilled persons to fill available jobs, rather than from lack of jobs."

Many educators feel that industry should provide its own training or that industry would rather do their own training. It is true that industry has and still does spend a considerable amount of money and energy for the training of its personnel. They have done this primarily because they have been forced to and not because they wish to. They are forced to provide training because the school systems in many areas have failed to do so. Industry is paying double for this type of education, once as a taxpayer and again for their own specific training. Most industries today feel that the educative process should be carried out in the school where adequate training facilities and trained personnel are more readily available to carry out a successful program.

In closing I would like to quote the educational philosophy of a good friend and colleague of mine, Dr. E. L. Kurth, Assistant and Director, Vocational, Technical and Adult Programs, Florida State Department of Education: "Education as currency can be likened to a coin, one side represents general education and the other side vocational education. If the coin is split in two, it becomes counterfeit and, therefore, non-negotiable. If general education and vocational education are separated, the product of education, the learner, also becomes a counterfeit individual and is non-negotiable in the adult world of work as a useful, successful citizen. Vocational education is incomplete and non-negotiable without a sound, general education foundation, and likewise, general education has little meaning without vocational competency to make it complete and make the currency negotiable and acceptable in the market place."

"For some it is necessary to possess this kind of negotiable currency by age 18 or before. For some, this may come after graduation from college, a junior college, or a vocational school; but every individual who is an effective citizen needs it."

The education pendulum always swings with society's desires, emotions, and needs. Currently the pendulum is swinging toward more vocational and technical training. Are we ready to swing along with this trend for better, fuller vocational education for the youth and adults of Montana?

"BUSINESS EDUCATION PROGRAMS FOR MONTANA HIGH SCHOOLS"

by
Dr. Harvey A. Larson, Head
Commerce Department
Montana State College
Florence Hotel, Missoula, May 9, 1963

A widely accepted definition of the secondary school business education curriculum states that it is: "A special area of instruction that deals directly with the business skills and techniques, business knowledges and facts, business understandings, economic understandings, business attitudes, business appreciations, and business ideals necessary to understand and adjust to that economic and social institution called business." A program of business education in the high school today must accomplish a twofold purpose as it is concerned with two major aspects of the education of youth:

1. That which we call general education including the knowledge, attitudes, and non-vocational skills needed by all persons to be effective in their personal economics and in their understanding of our economic system.
2. Vocational education including the knowledge and skills needed for initial employment and for advancement in a business career.

It has for its primary purpose the preparation of pupils to fill business positions or to understand better our economic system. Business education is as important to persons who consume goods and services as it is to those who are engaged in the production of goods and services.

Business education as a public school responsibility dates back only about 75 years. It first was included for rather narrow vocational purposes to aid in the preparation of pupils to earn their living as bookkeepers and stenographers. The economic developments and technological advancements of later years forced business leaders to become aware of the related skills and increased knowledge which an efficient office worker should possess and the curriculum was broadened to include additional business subjects.

An analysis of many business education subjects will show that most of them may be used personally as well as vocationally. More and more non-business students began to elect business subjects, not with the idea of using them to earn a living, but for their own personal use. This idea seems logical since ours is an economic society and a knowledge of business should be an essential part of one's general education. Modern business methods and the complexities of our economic system demand that all schools provide a sound program of business education.

We have all read various statements of the purposes of education in America such as, "The Purpose of Education in American Democracy", "The Cardinal Principles" and others. We can observe that every major statement of this type has included principles dealing with economic efficiency and the ability to succeed vocationally which have a direct implication for business education.

The Policies Commission for Business and Economic Education of the United Business Education Association together with Delta Pi Epsilon, a national honorary graduate fraternity in business education recently published the following statement: "We believe that:

1. Business education has an important contribution to make to the economic literacy of every high school boy and girl.
2. Business education must provide an adequate program of vocational preparation for those boys and girls who will enter business upon completing high school.
3. Business education courses should be available as electives to those high school students planning to go to college and should be accepted by the colleges and universities as meeting part of the college entrance requirements."

We are chiefly concerned at this time with the vocational aspects of business education and with the occupational changes and trends which are indicated. There is an expanding need for workers with business training and the clerical and sales occupational group is growing rapidly. We also have been told that additions to the labor force will exceed ten million between 1960 and 1965. The demand for workers at this time is further intensified by the low birth rate of the 1930's. This indicates that in the years ahead employers will be obliged to continue to accept high school graduates for the large numbers of beginning jobs in office and sales positions.

The question is, "What are we doing about business education in Montana?" In answer to this, we have studied the current enrollment figures of 167 public high schools in our state as submitted to the Department of Public Instruction: This was a quantitative approach to the question and no attempt was made to determine the quality of programs. The first observation might be that regardless of the limitations imposed by small size and resources, we find business education represented in the curriculum of every school. It may be confined to a course in typewriting but more often we also find additional subjects being offered. Two hundred and fifty-three teachers are involved in the teaching of business subjects--155 are business education majors with an average of 65 quarter credit hours in business subjects. The other 38 have minors or less than minors in business education with an average of 38 quarter credit hours in the field.

Enrollments in High School Business Subjects in 167 Montana Public High Schools 1962-1963

Subject	Total Enrollment	Classes	Mean Class Size
Typing I	6,669	324	21
Typing II	2,093	127	16
Personal Typing	458	18	25
Shorthand I	1,813	130	14
Shorthand II	611	50	12
Bookkeeping I	3,241	174	19
Bookkeeping II	137	8	17
Business Law	399	24	16
Office Practice	187	22	9
Secretarial Practice	73	6	12
General Business	674	33	20
Business Mathematics	337	19	18

Other Business Courses

Typing III	2 classes	71 enrolled
Shorthand III	1 class	19 enrolled
Record Keeping	4 classes	121 enrolled
Clerical Practice	2 classes	45 enrolled
Stenography	3 classes	69 enrolled
Notehand	1 class	14 enrolled
Office Training	2 classes	57 enrolled
Business English	4 classes	87 enrolled
Economics	7 classes	121 enrolled
Business Machines	1 class	19 enrolled
Consumer Economics	1 class	4 enrolled
Machine Bookkeeping	3 classes	61 enrolled

Distributive Education:	Six High School Programs	216 students
	Two Post-High School Programs	19 students
	Five Adult Programs	190 students

At the present time there are over 17,000 student enrollments in business subjects in Montana High Schools in the 966 classes being taught in 167 high schools surveyed. We find typing, shorthand and bookkeeping well represented but there appears to be no consistent pattern for some twenty other business subjects.

In order to attain the goals of both economic education and vocational preparation through the Business Education Program in the secondary school, we must examine what we are doing and determine what should be done. There is a need for leadership in Business Education in this state which could come from the Department of Public Instruction, the Teacher Training Institutions and the Montana Business Teachers Association.

The program for each school will depend upon their resources and available staff but I believe that every school should teach typing which they are all doing; bookkeeping which most of them are now doing; general business which relatively few of them are doing at the present time. The smaller schools might omit the teaching of shorthand rather than attempt to maintain a very small class. They might consider clerical practice for an additional course in business.

The larger schools of the state can better afford to offer those additional courses which will adequately prepare youth for initial employment in business. Such offerings would include shorthand and transcription, office practice and distributive education including training for service occupations. Community job standards should be met by the student in completing a vocational business education program. Certificates evidencing vocational proficiency could be issued in addition to the regular high school diploma. Business education has an important part to play in the guidance of youth because of the diversity of business courses offered and the high proportion of graduates who go into business occupations. Through business courses, students can become acquainted with the many opportunities in business and the requirements for entering the various fields. The preparation of youth to succeed in the world of work is an important objective of the American high school. Office and distributive occupations constitute one of the fastest growing employment groups in the labor market. As our economy expands, the demand for youth prepared for occupations in these areas will continue to increase.

"PROGRAM OF AGRICULTURAL EDUCATION FOR MONTANA YOUTH"

by

Max Amberson, Supervisor
Agricultural Education
State Department of Public Instruction
Helena, Montana

Agriculture has a new challenge to offer to the youth of Montana. As we take a close look at the opportunities in the dynamic industry of today's agriculture we find thousands of jobs in hundreds of careers--many which were relatively unknown a few years ago! Agriculture in Montana, as in other parts of the country, is no longer just farming. Agriculture is science at work. It is production of food and fiber on a large scale. It is business and industry furnishing supplies and equipment to producers, buying and processing of crops and livestock to turn these products mechanically into appealing packages for our consumers.

To efficiently meet these changing demands, agriculture needs to take on a broader meaning. To run this type of agriculture it needs men and women for jobs more often in the city than on the farm. It demands highly qualified people, many with college degrees, while other jobs in agriculture may be satisfied with persons trained at the high school, post high school, or at short intensive post high school technical courses.

Our 67 land grant colleges and universities, the primary sources of college trained personnel in the field of agriculture, annually graduate about 7500 students. Our land grant colleges prepare agriculturalists in eight main areas; farming and ranching, research, industry, business service areas, communications, conservation, recreation and education. In education alone, more than 2,000 new teachers go each year to positions in high school departments of vocational agriculture, agricultural colleges, and the agricultural extension service. Nations everywhere seek the knowledge which has made the United States the most efficient agricultural producer in the world. Each year many agriculture teachers are employed by foreign countries. Industry likes to hire teachers to train its employees; due to their formal training and practical experience. As farms continue to increase in size and demand larger amounts of capital, labor and equipment, the operator must have more technical knowledge in such fields as management, engineering, chemistry, genetics, nutrition, entomology and economics to mention a few. The successful farmer today is one who applies sound management practices with this years improved agricultural practices. He is always looking for more efficient methods to increase his operation efficiency. Future Farmers and ranchers will more frequently include post high school, college short courses, or college graduation in preparation for farming or ranching. The successful farmer will continue to be one of America's most important citizens. He is a key man and a corner stone in the nation's economy.

Montana's economy is basically agricultural and according to our economic outlook it appears this will continue to be true. Montana's agricultural income for 1961 was $392.7 million compared with $182 for mining, $218.3 for manufacturing, and $84.9 for tourism. What happens in the non-farm part of the Montana economy is very important to farm people. It is true that Montana farmers do not depend upon the rest of Montana for markets for much of their commodities, but the non-farm part of the economy affects Montana farmers in other ways. For example, should our larger cities as Billings, Great Falls, continue to grow they will develop a "pulling" force which may attract new industries and businesses and more people. In the metropolitan areas food processing plants may come into existence in which may furnish improved market outlets for livestock and livestock products, vegetables, fruits, and so on.

Moreover, if non-farm agricultural enterprises flourish there will be opportunities in Montana for more farm boys who cannot find a place on the farm but yet have valuable farm backgrounds. In recent years we have been exporting many young people who are being raised and educated in the state, but who are contributing their skills and talent to other regions.

Net out-migration for Montana for males and females as a percent of 1950 population for the years 1950 and 1960 was 4.37. The age group represented in this migration was 15 through 64. This would also be true of other primarily agricultural states. The Upper Midwest Research Development Council reported a net migration of 5.17 for all ages in Montana, North and South Dakota, Minnesota, Northwest Wisconsin and upper Michigan for the years 1950 and 1960. Montana youth have been reaching maturity faster than jobs have been increasing, therefore, they by necessity must leave the state for gainful employment.

> "In 1960 3,800 boys and girls had an interest in leaving. Because a greater number of youth will mature in the mid-1960's we can expect the out-migration to increase unless the number of new jobs increases. Annual out-migration could easily reach 7,500 by 1970 if jobs are not available here. Every youth who leaves Montana takes an investment of $6,000 in elementary and high school education. Therefore, we export an investment of $6 million with every 1,000 youths who leave."[1]

Due to Montana's economic condition the most promising outlook for employment in Montana lies primarily in agriculture. I will explain the various programs of agricultural education for Montana youth that presently exist.

Agricultural education in Montana is made available in 62 of our 211 accredited junior and senior high schools. Fifty-seven of these programs are of the vocational agricultural education type with the balance being general agriculture courses. In discussing agricultural programs for Montana youth we should not overlook the 4-H Club Program sponsored by the Montana Cooperative Extension Service. Also of importance are youth auxiliaries sponsored by the three major farm organizations, Farm Bureau, Farmers Union and the Grange.

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[1] Montana Can Grow, Cooperative Extension Service, MSC, Folder 76, Jan. 1962, p. 2.

Agricultural education has become an integral and established part of American public education as evidenced by some 10,000 departments of agricultural education in U.S. high schools. In Montana, as was mentioned, 62 junior and senior schools offer instruction in agriculture.

The purpose of agricultural education in our Montana high schools is the same as for all education; that is to train and develop individuals to think so they might solve their social and economic problems in life and better prepare themselves for complete living.

> "The primary objectives in agricultural education are, to help prepare youth for farming and for off-farm agricultural occupations which require competence in farming."[2]

These objectives in agricultural education are met by contributing to experiences of an individual interested in the pursuit of agriculture, by offering systematic instruction in four major areas, agricultural science, agricultural mechanics, agricultural experience programs, and the Future Farmers of America.

The curriculum for high school students studying vocational agriculture embodies four main areas in approximately the following time proportions: Agricultural Science, 45 percent; Agricultural Mechanics, 40 percent; Agricultural Experience Programs, 3 percent; and the Future Farmers of America, 77 percent. The percentages of time spent in particular areas may vary with the teacher's interest and also by the type of agriculture in each community. It's extremely difficult to measure the times spent by each boy with his agricultural experience program, the percentages mentioned refer to organized class instruction. The curriculum in agricultural education is sufficiently flexible to meet the needs of students enrolled in the many varied agricultural communities.

Miss Harriet Miller, Superintendent of Public Instruction, in April of 1962, appointed an Agricultural Education Study Guide Committee of Vo-Ag. instructors, agricultural college personnel and school administrators to carefully review and study the curriculum needs for high school agriculture classes. As a result of many meetings and much work by a dedicated committee we are happy to report a quite progressive curriculum guide for agricultural education is now a reality. Judging by the many favorable remarks from Vo-Ag. instructors and School Administrators, we believe Vo-Ag. teachers will be working with a guide as modern as modern day agriculture. The major emphasis in the new guide is to probe greater depth in the various subject matter areas as well as for better understanding of the many scientific principles from which agriculturalists base sound decisions. We believe this approach will better prepare youth for farming and for agricultural occupations requiring competence in farming. A look into the four main areas of the agricultural curriculum may lend an even better understanding of the process of agricultural education in our high schools.

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[2] 1961 Pacific Regional Conference of Supervisors and Teacher Trainers in Agricultural Education, Reno, Nevada, Objectives in Vo-Ag. in U.S.

Agricultural Science: In agricultural science study is directed towards plant, animal and soil sciences and their application to production, processing, marketing and management of agricultural resources.

Agricultural Mechanics: In agricultural mechanics the Vo-Ag. student is taught the appreciation of basic mechanical skills and the development of mechanical abilities. Some stress is placed on the application of these skills in performing farm shop activities, in operating, maintaining, repairing and adjusting farm machinery; in constructing and maintaining farm buildings, and performing the mechanical activities in soil and water management problems.

Agricultural Experience Programs: Agricultural experience programs of vocational agriculture students are required of each student enrolled. These projects must continue for at least 6 months and are encouraged to be continuous from year to year. Production programs are encouraged, supplemented by improvement and supplementary agricultural projects. "Work experience programs" are permitted by placement on farms or in specialized farming businesses for a period of at least six months.

Future Farmers of America: The Future Farmers of America is an integral but voluntary organization of, by, and for boys enrolled in vocational agricultural education. Purposes of the organization are to develop aggressive rural agricultural leadership, citizenship and cooperation. Membership is made up of boys enrolled in Vo-Ag. or those who have completed all the work in agriculture. FFA chapters are established and under the supervision of the agriculture instructor who serves as FFA advisor in all schools meeting standards for a qualified vocational agricultural education department. The local chapter is an integral part of the school, just as it is inter-curricular to vo-ag. Each chapter has its own set of officers, constitution, and program of work. Each chapter belongs to the state association and national organization. Nearly all the activities of a local chapter are educational and service in nature.

Boys taking four years of vocational agricultural education plus the required subjects offered in high school find themselves well prepared for post high school training of a technical nature or for furthering training at the college level.

Approximately 75 percent of the boys enrolled in the college of agriculture at MSC are former high school students of vocational agricultural education.

General agriculture in Montana high schools differs from vocational agricultural education in that general agriculture is primarily a classroom subject dealing only with the science of agriculture. Students may or may not have an opportunity for farm mechanics training, agricultural experience programs, or in-school organization of farm boys at the Future Farmers of America. They may and sometimes do organize local agricultural clubs.

We believe the agricultural experience program concept practiced in vocational agriculture is sound educationally, economically, psychologically and socially.

Educationally: The agricultural experience program ties knowledge and understanding together with doing. Learning involves more than knowledge and understanding; it involves application. Learning involves a change or up-grading of behavior important to application in life. Of no less importance is the development of good work habits.

Economically: It is within the realm of nearly every student to earn, productively invest, or save enough money from agricultural experience programs to enable him to make a small start in farming, or he may choose to use earnings to further his education.

Psychologically: A boy has a financial interest or a designated obligation on a farm or in an agricultural related enterprise giving him a feeling of accomplishment necessary to self-realization and development into independence.

Socially: In a democracy a person must show awareness of an interest in social problems and needs. The fact that a boy grows in ability in decision making, management, and economics makes him more socially accepted within his family and to those around him.

Agricultural instruction began in Montana before 1917. With passage of the Smith Hughes Act of 1917 the national government began to share in financing vocational education in agriculture at the high school and adult level. Though our national government has reaffirmed its desire to encourage and extend this type of agricultural education, more initiative has been shown by individual states and communities. Although they have been required to provide only one dollar for each dollar of national funds, local schools are now supplying approximately four dollars for each national dollar. In addition, local schools furnish their own funds for all buildings, equipment, and teaching aids used in agricultural education.

Enrollment in 62 agricultural and vocational agricultural education departments in Montana is approximately 2200 students. Although this may seem like a large enrollment it isn't even adequate to meet needs of replacements for farmers and ranchers in Montana due to retirement, disabilities, and business failures.

We should remember that a high school education for most phases of agriculture is not now adequate. Additional training is highly desired, if not required, for success. Training beyond the high school level in agricultural education is available to Montana students at Northern Montana College, Montana State College, and through some high schools. Training of the short-course nature is available at Northern Montana College in agri-business and farm and ranch management. Montana State College will soon offer a terminal one or two year course in general agriculture. They offer B.S. degrees in five main areas of agriculture; agricultural science, agricultural production, agricultural business, agricultural engineering and agricultural education. There is a course that can be made to fit the needs of every student interested in agriculture.

Approximately half of high schools offering vocational agricultural education hold adult classes for young and/or adult farmers. These classes are usually of an enterprise type, courses of particular interest have been those in veterinary science, farm law, soils and crops, farm management and agricultural mechanics. Some off-campus agricultural courses are also being held for adult farmers under the continuing education program at MSC. There is a particular need to offer further education in agriculture for young farmers between the ages of 18 and 30. Many in this age group have problems that are similar, that of trying to get established in farming. Many in this age group have heavy debt load and are seeking sound management practices that will help determine their eventual success. Persons interested in this type of program should contact the local vo-ag. instructor. Every vo-ag. instructor is interested and educationally equipped to organize and help conduct programs of young and/or adult farm classes and can receive state reimbursement for these classes.

To adequately cover the title "Programs of Agricultural Education for Montana Youth", I should no doubt mention other agricultural youth programs as 4-H Club organized under the Cooperative Extension Service and auxiliaries of the major farm organizations; Farm Bureau, Farmers Union, Grange, even though they might be classes as informal educational programs. 4-H Clubs in Montana are organized under the direction of each county extension agent. Each club is organized using both youth and adult leaders. Members must carry learning projects either in agriculture or non-agriculture fields. Membership in 4-H Clubs in Montana is approximately 13,600 made up of both rural and urban youth. 4-H Clubs develop sound learning experiences for members that can lead to a better understanding of their chosen area. Great stress is also placed on becoming more productive and useful citizens.

Farm organization sponsored youth groups are organized for educational as well as social reasons. Their organizations are usually led by officers elected from membership and advised by leaders of local farm organizations. These groups serve to educate youth at an early age about the fundamental beliefs and philosophies of the organization as well as to encourage and aid in individual development.

New programs in agriculture will evolve for Montana youth as we identify the areas of training needs in our changing dynamic agriculture. The programs we have today serve to build a solid foundation for advanced training. It may be that specialized training in agriculture at the post high school level would lead itself to more specialization preparatory to gainful employment in areas of agriculture. We will want to be alert to training needs for special jobs in agriculture as these areas are identified by local and area surveys. Areas of need may be such that several of the existing educational agencies must cooperate to provide the training necessary for competence to employment in agriculture.

I am following with great interest a survey presently being conducted in all of Missoula County. This survey will point out every employment opportunity and something about the job description. From this survey we hope to glean the agricultural jobs available and the types of training needed for each.

VOCATIONAL HOME ECONOMICS EDUCATION IN MONTANA

by

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The major goal of home economics education has long been to prepare youth and adults for responsibilities and activities involved in homemaking and in achieving family well-being. This still continues to be the major goal, but new emphases and methods of instruction are necessary as one's views change in our state and nation and the changed and changing ways in which families live, and the new home problems with which both youth and adults are coping.

The emphasis now on manpower needs for the economy of Montana and the nation and the importance of vocational education in preparing personnel to meet them points up the need for strengthening home economics education in the state.

A brief glance at the history of vocational home economics education shows that Montana has had a vocational education program in home economics since the inception of the Smith Hughes Act in 1917. Records show that "The Montana Legislature of 1917 passed an appropriation to meet provisions of the Smith Hughes Act",[1] and that three schools took part in the program the first year. At the present time there are 66 vocational home economics departments in the state. There are a total of 137 public schools teaching home economics in Montana. This includes 13 junior high schools, 110 senior high schools, 11 elementary schools and 3 state schools. There are still 66 high schools in Montana that do not offer any home economics. These high schools are small with an average enrollment of 55.

Today the study of home economics is just as important as it was many years ago, perhaps even more so. The effect of technological development and social and economic changes on homes and families is increasing constantly. Many of the technological and economic changes have a most important bearing on home economics because of their effect on the homes and families of the state and nation. Here are a few of the national changes (they could very well be Montana changes also) which are affecting the home life of all of our people:

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[1] History of Agricultural Education, Less Than College Grade in Montana, 1842-1940. Compiled by D. L. MacDonald, Assistant Supervisor of Agricultural Education, Montana State College Library, Bozeman, Montana, p. 6.

"1. Large scale employment of women in the labor force, More homemakers, and homemakers with children, are working outside the home today than ever before, and thus are combining two roles--homemaking and wage earning.

"2. Earlier marriages. At present 53 percent of all girls between the ages of 15 and 19 are, or have been married. One out of every three brides, and one out of every four mothers bearing a first child, is less than 20 years old. (In Montana our average marriage age for girls is 18.)

"3. Our mobile population. Families are moving from place to place, from city to city, from farms to cities and towns, to get or to hold jobs. This creates new problems of housing, transportation, financial planning, housekeeping, child rearing, and social adjustments for all family members. The reduction of contact with relatives and friends has removed from young people, and those not so young, many of the controls on social behavior which small towns and long-time friends exercise.

"4. The economic development of the nation. This has reduced the gap between the rich and the poor, and expanded the purchasing power of families generally. The wide availability of goods and services places new decision-making responsibilities on young and old consumers alike.

"5. The diverse activities of family members in home, work, education, play and civic programs. These are often carried on in new, and certainly in changing situations.

"Tying in with many of these changes is the movement toward a more organized society which makes it necessary for family members to work with many different groups. Family life problems are basically social, and to solve these, many families (but not all) work with many different kinds of interest groups. The welfare of any one family is interrelated to that of other families, and programs are developed on a community basis."[2]

In light of the above statements in regard to purpose and importance of teaching vocational home economics education, Montana is in the middle of a five year curriculum development program. Several local teachers have made surveys in their own communities with former students. These individual surveys all indicated students and young adults were having to meet the new demands of society. The emphasis on the skills of homemaking is now shifting to emphasis on management, decision making and relationships. The "New Directions" of curriculum in Montana is "for home economics to help people identify and develop certain fundamental competences that will be effective in personal and family living regardless of the particular circumstances of the individual or family.

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[2] Home Economics in Vocational Education--What Is Required in Today's Situation? Edna P. Amidon, Director, Home Economics Education Branch, U. S. Office of Education.

"Fundamental to the effective living are the competences to:

Establish values which give meaning to personal, family and community living; select goals appropriate to these values.
Create a home and community environment conducive to the healthy growth and development of all members of the family at all stages of the family cycle.
Achieve good interpersonal relationships within the home and within the community.
Nurture the young and foster their physical, mental, and social growth and development.
Make and carry out intelligent decisions regarding the use of personal, family and community resources.
Establish long-range goals for financial security and work toward their achievement.
Plan consumption of goods and services--including food, clothing and housing--in ways that will promote values and goals established by the family.
Purchase consumer goods and services appropriate to an over-all consumption plan and wise use of economic resources.
Perform the tasks of maintaining a home in such a way that they will contribute effectively to furthering individual and family goals.
Enrich personal and family life through the arts and humanities and through refreshing and creative use of leisure.
Take an intelligent part in legislative and other social action programs which directly affect the welfare of individuals and families.
Develop mutual understanding and appreciation of differing cultures and ways of life, and cooperate with people of other cultures who are striving to raise levels of living."[3]

Work toward the new curriculum guide is progressing with nearly all teachers contributing to some phase of the program. By 1965 the revised curriculum guide should be completed.

"The aim of vocational education is to educate present and prospective workers for proficiency in their chosen, socially useful occupations. When applied to vocational homemaking education, this aim is one of educating present and prospective homemakers for the efficient and effective performance of the occupation of homemaking. The primary purposes of vocational education are those concerned with assisting the student of homemaking to (1) determine worthwhile values for immediate personal and home living; (2) achieve a wholesome personality and satisfactory personal and social relationships; (3) discover her needs, interests and capabilities as related to home and family life; and (4) use individual and family resources to achieve the desired goals in home and family living."[4]

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[3] Home Economics--New Directions, American Home Economics Association, Washington, D. C., 1959. pp. 8-9.

[4] Roy W. Roberts, Vocational and Practical Arts Education, Harper and Bros. 1957. p. 254.

The vocational homemaking curriculum for in-school youth in Montana is in grades 9 through 12. It is included in not less than two of these years and more frequently in three of them. The home economics courses are usually referred to as Home Economics I, Home Economics II, Advanced, Special, Survey, etc. The administrative relationships and arrangements for the class under the Montana vocational education standards shall be designated by the state education agency. A few such standards are:

> "The space and equipment shall be adequate to carry out the purpose for which the program is established. New facilities shall be planned in cooperation with a representative of the State Department of Public Instruction, Vocational Education Section.
> The equipment in the school shall include adequate facilities to make possible individual and group learning experiences in all aspects of homemaking.
> It is recommended that: Each day-school program will include a chapter of Future Homemakers of America.
> Regularly scheduled conference periods to work with pupils on planning and evaluating home projects.
> Home and community contacts by the teachers.
> Supervised out-of-school experiences in homes.
> Provision of services beyond the regular school year.
> Assistance to programs of education for home and family living.
> Organized classes for out-of-school groups.
> The minimum hours of instruction are to be in any one year not less than that required for a full unit of credit for other similar school subjects."[5]

Special day-school courses are organized for boys by some home economics teachers. These vary in content with the needs of the group. Some are concerned with problems of social adjustment, some with personal development and some with responsibilities of family life. Some courses are organized as short units and others extend for one or two semesters. Some Montana home economics teachers offer courses where boys and girls together study problems of social and personal development. In some schools there is an exchange program with the shop classes or agriculture. The home economics teacher instructs the boys in such problems as social customs, caring for clothes and meal preparation. The agriculture teacher provides some appropriate instruction for the girls such as gardening, landscaping, use of home tools, and simple home repairs. The decision to have separate or mixed classes depends upon such factors as convenience, school and community interest. Frequently, the students themselves are in a position to help determine what they are interested in as far as curriculum for a mixed class.

A unique feature of the vocational home economics program is the directed home experience program. Home experience is defined as "learning activities related to family problems, planned, carried out and evaluated by the students in their homes, under the guidance of the teacher and parents, for the purpose of personal development and improvement of home life."[6]

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[5] Montana State Plan for Vocational Home Economics Education, State Capitol Building, Helena, Montana.

[6] American Vocational Association, Definitions of Terms in Vocational and Practical Arts Education, Committee on Research and Publications, the Association, 1954, p. 15.

Schools cannot always provide all the facilities and activities of the home. The home experience program provides opportunities for practice in developing homemaking abilities. It enables home economics students to put into practice some of the knowledge they have acquired in the classroom.

Teacher qualifications in vocational homemaking education are espressed in terms of personal characteristics; academic education, including professional education; and homemaking experience. Many studies indicate the relationship between success in teaching and the possession of certain personality traits that are difficult to define.

Home economics teachers need to have broad interests, cooperate with community groups and other school departments, they need to know their subject matter and know how to stimulate their students to acquire the desired knowledge, skills and attitudes.

The Montana State Plan for Vocational Home Economics Education specifies the minimum educational experience required for teachers. In general it consists of the satisfactory completion of a four year undergraduate course from an institution approved by the State Board for Vocational Education for training vocational home economics teachers. The four year curriculum includes general education subjects, subject matter in technical home economics and professional education subjects. The curriculum usually provides for a variety of experiences, including some practical homemaking activities, participation in community activities, work experience to help students develop skills, participation in student organizations such as the Future Homemakers Association, and experiences in caring for children.

There is a supervised experience in a total school program provided and this includes directed teaching and other responsibilities usually associated with home economics education. Montana State College and Montana State University are approved for training home economics teachers. Both schools offer a broad program to the home economics education major.

Various kinds of facilities are used for housing vocational home economics departments in public schools. In Montana the all-purpose laboratory that is equipped for all phases of home economics is the most popular. Furnishings in the all-purpose laboratory are of the movable type to permit flexible arrangements. Some of the larger home economics departments in Montana junior and senior high schools are housed in two or more rooms depending on the number of teachers. One room, under this arrangement may be equipped for a foods laboratory and the other arranged as a clothing laboratory. If a third area is available it is used for a home living area.

The kind and quantity of equipment and furnishings for the home economics department depend on the needs of the school and community.

Future Homemakers of America is a national organization of girls and boys studying homemaking in high schools of the United States. As an integral part of the homemaking program FHA provides opportunities for students to have additional experiences in planning and carrying out activities related to homemaking.

The national organization is composed of chartered state associations which are made up of local chapters. Membership in Future Hamemakers of America is composed of students enrolled in high school, public or private, vocational or non-vocational schools, who are taking or have taken a homemaking course in a junior or senior high school. Membership is voluntary.[7]

In Montana there are 76 chapters in 74 schools. Of these, 54 chapters are in vocational departments and 22 chapters are in non-vocational departments. Membership at present totals approximately 2400 students.

The Home Economics Education Branch of the Office of Education and the American Home Economics Association are co-sponsors of Future Homemakers of America. Cooperating groups are home economics sections of the American Vocational Association and the National Education Association. The head state supervisor of home economics education gives general guidance to the program in her state. The state adviser, who is the administrative officer of the state association, is usually a member of the state home economics education supervisory staff, and is appointed by the state supervisor of home economics in cooperation with the state advisory board. The chapter adviser who is the administrative officer of the local chapter is the homemaking teacher in the local school. Parents may serve as consultants to local chapters and state associations.[8] In Montana most local chapters have chapter mothers who serve in this capacity. The state association has a state chapter mother who serves on the advisory board as a consultant. The state chapter mother is elected annually at the state convention.

The officers of the state association of Future Homemakers of America are elected annually in the ten districts during the district meetings that are held each fall. The officer is elected by majority vote of the delegates present with due consideration being given to the qualifications of candidates presented by local chapters.[9]

Each state officer elected fills a state office and also serves as chairman in the district in which she is elected. The state office to which a girl is elected is rotated from district to district. As an example, the girl selected is chairman from District I would serve as State President during one year. The next year the girl elected as chairman of District I would serve as State Vice President for that year. The ten state officers compose the executive council for the Montana Association. These officers meet for one week during the summer each year to plan a program of work for the year for the state association. This program of work consists of objectives and projects the officers would like to see emphasized by local chapters throughout the year. They also suggest chapter and individual activities that can be used to carry out the objectives and projects that they have chosen for the year. This program of work, with suggestions, is sent to each local chapter at the beginning of each school year.

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[7] Official Guide for Future Homemakers of America, Office of Education, Dept. of Health, Education and Welfare, Washington 25, D.C., 1960 edition, p.5.

[8] FHA in Focus, Office of Education, Dept. of Health, Education & Welfare, Washington 25, D.C., revised 1957.

[9] Montana Association, Future Homemakers of America, Constitution, Home Economics Education, Dept. of Public Instruction, Helena, Montana, revised 1961.

Each year members of local chapters develop a local program of work including projects and experiences which will help them work toward the state and national programs of work. The local program of work is based on personal, family and community needs. Future Homemakers believe that every individual member counts, that he has a special contribution to make to the chapter, that through group cooperation the chapter can achieve many goals that an individual cannot, that teenage members and adults can work together each gaining from the other.[10]

"The over-all goal of the organization is to help individuals improve personal family and community living now and in the future. To emphasize specific parts of the over-all goal, Future Homemakers of America have eight purposes. They are: 1) To promote a growing appreciation of the joys and satisfactions of homemaking; 2) To emphasize the importance of worthy home membership; 3) To encourage democracy in home and community life; 4) To work for good home and family life for all; 5) To promote international good will; 6) To foster the development of creative leadership in home and community life; 7) To provide wholesome individual and group recreation; and 8) To further interest in home economics."[11]

The state and national associations are supported solely by individual dues from members. In the Montana Association of Future Homemakers of America five cents from each member's dues goes into a scholarship fund. This, plus money collected at roll call during district meetings supports four $125 scholarships given each year to outstanding FHA members interested in working towards a college degree in home economics.

The increasing interest of adults in continuing their education has led to the organization of classes for out-of-school youth and adults. Adults differ from day-school students in their maturity; needs and interests in homemaking; responsibility for homemaking; and time available for educational programs. Homemaking classes for out-of-school youth and adults should provide instruction and directed home experiences in the several aspects of home economics. This instruction may be organized as short units of five to ten hours each or as a single unit extending throughout the year. Some communities plan homemaking programs that extend over three or four years for out-of-school groups. The homemaking class for the out-of-school group may be scheduled to meet at a time of day convenient for the class members. The class is usually taught by the homemaking teacher employed to teach in the secondary school. However, graduate home economists living in the community who are not teaching day-school classes are encouraged to teach adult classes.

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[10] Official Guide, op. cit., p. 6.

[11] Official Guide, op. cit., p. 5.

Various aspects of the adult education program in Montana are:

The needs of the community and interest of the group shall help determine the aspects of homemaking to be studied.
Over a period of years the program should include various aspects of homemaking.
An organized class shall meet for at least six sessions in one specific area of homemaking. Each session shall meet for a minimum of one and one half hours. The minimum enrollment shall be sufficient to justify the time and money involved.
Provision for evaluation will be made in terms of the extent to which the program meets individual and community needs.
Space and equipment shall be adequate to carry out the purpose of the program. Such space and equipment shall be provided for by the local agency.
The reimbursable time in the teacher's schedule shall include: 1) Time for instruction, 2) Time for directing home and community experiences of enrollees through home and community visits, 3) Time for promotion and organization of the program. One hour per class period can be reimbursed for directed home and community visits and time for promotion and organization.[12]

This school year there have been 22 adult programs in home economics with 360 students participating. Curriculum for the adult classes has included all phases of clothing construction, millinery, home furnishing, upholstery, with emphasis on consumer education.

Home economics education for adults is another important phase of the total home economics program. Stressing the major goal of home economics to prepare adults and youth for the responsibilities and activities involved in homemaking and in achieving family well-being.

Today the study of home economics by youth and adults is just as important as it was many years ago and perhaps even more so because of the technological development and social and economic changes in homes and families today.

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[12] Montana State Plan, op. cit.

VOCATIONAL, TECHNICAL AND PRACTICAL ARTS EDUCATION IN MONTANA METROPOLITAN HIGH SCHOOLS

by

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School drop outs, the ever increasing burden of city, county and state welfare agencies and vocational and technical education are related problems with which every community must come to grips, and soon. A glimpse into the 1970's with an honest and realistic appraisal of what the problem portends, should strike fear in the heart of every taxpayer, not just the parents or children and youth of school age.

Montana, with its vast area and small population faces the same challenge as does the rest of the nation, to provide vocational training for its youth who will terminate their formal education with high school graduation, or who will terminate it earlier by leaving school. It is, however, a problem complicated by low density of population, low tax bases, and small, widely scattered administrative units, few of which could finance or justify a program of vocational education to meet the needs of the youth in their area alone.

Each year our U. S. schools lose over one million students by drop-out. Thus, one million are added annually to the group of young Americans who, by choice, lack of foresight, or lack of opportunity, throw themselves on the labor market with no marketable skill. One million young persons equipped to do only common labor.

At present rates, this group will number nine million by 1970--and ever increasing common labor supply which will compete for a rapidly decreasing number of jobs. Nine million, who, due to automation and technological advances, will be largely unemployable because they are untrained, and lack the basic education background that adequate training demands--all candidates for the permanent, hard core of unemployed.

Already this problem is felt in Billings and Yellowstone County, as well as in the other areas of the state, with the problem being felt most critically in the larger population centers.

In all counties in Montana there are families which in their life time will have cost the tax payers $10,000 - $20,000 - $30,000 and more. The majority of the heads of these families are school drop-outs with no skill or trade, and with no opportunity to change their current status. Admittedly, some would not change it if they could, but the majority are not welfare cases by choice. They are victims of a great scientific and technological advance that has made common labor a drug on the market. They are caught in an economy which in the future will require less and less of such services.

A recent study by the Ohio Bureau of Unemployment Compensation showed that of 215,000 unemployed, over 2/3 had not completed high school. Without doubt, many could not have survived the regular academic program, but the vast majority could have mastered some skill or trade that would have enabled them to earn a living and contribute to their local economy.

A community must count as loss, not only the cost of its welfare program, but must add the $55,000 difference in average lifetime earnings between the drop-out and the high school graduate. This is money that would have been spent in the community for support of family. Add to this the fact that the wage earner is a taxpayer, in many cases a home owner, contributing to the strength of the community economy rather than siphoning off tax money for his family's support and the bill adds up to an amount so enormous that a responsible community can no longer ignore it. Multiply this by the hundreds of drop-outs in Montana's schools each year and it reaches an amount so staggering that it could well affect the future economy of our state, and hence becomes a prime responsibility of local, county and state leadership.

I cite these figures to illustrate that we can afford a statewide program of vocational and technical education--in fact, we can no longer afford to shirk our responsibilities to our youth in this area of learning. I know not, nor is it my responsibility to decide on what level such a program will prove most practical. If it be on an area trade school basis, on a statewide basis, or on a combination of the two, matters little. The important thing is that it come about, that needed legislation relative to tuition for out of district students be passed, setting realistic fees, and that needed impetus be provided to get the program under way.

The fact that I make these statements does not make them so. It is, however, a repetition of statements that are being made all over our land, by educators, ministers, politicians, social workers and all those interested and concerned with what they see developing in our communities and our nation. Throughout the country committees are working, studies of community situations are being made, needs are being assessed, and programs of many kinds are being implemented to help our disadvantaged youth, our drop-outs, and adults in need of re-training due to loss of jobs due to automation, to learn a trade or technical skill that will enable them to support themselves and their families, and to become contributing members of a vigorous society and economy.

We in Montana should take stock of our present programs of vocational and technical training, compare these with our needs, now and in the future, and then develop plans that will help us achieve our goals in this area.

A survey of the largest schools in Montana (14), who enroll over half of the high school pupils in the state, shows a wide variance of programs. All offer courses in the areas of Homemaking and Business

Education, but here the similarity ends. School programs beyond this point vary from no additional offerings, to the reasonably comprehensive program offered in the Helena Public Schools, programs I will not discuss, as they are the subject of other papers in this series of reports.

Of the fourteen schools surveyed, four offered no vocational courses beyond the usual Homemaking, Business Education, Wood Shop and Vocational Agriculture, with 3 of the 4 not offering Vocational Agriculture. The most popular offering beyond the four courses mentioned is Auto Mechanics, this being offered in six of the fourteen schools. All of the schools contacted offer courses in wood shop. None regard them as truly vocational in nature, or intent. They are regarded as hobby or craft type courses. Butte and Helena offer carpentry courses on a vocational level. Many youngsters in our wood shop courses go on into carpentry and the building trades and that they profit from the woodshop experience in high school. It would seem that with all the new construction that is going on in every community, and that which the future promises, courses leading to apprenticeship in many of the building trades should be high on the list for consideration by our larger school administrators.

Most of the schools regard mechanical drawing, which is a part of each school's shop offerings as vocational in nature as it has little hobby or recreational value. Several schools commented that they offer it primarily for those who take second year shop and are required to make and read blueprints; two stated that they offer it primarily for students who are college bound in the field of engineering. I cite this example to illustrate the various motives, and points of view in regard to what is normally considered a vocational subject

Only four schools list Distributive Education as a vocational offering in their school. Lack of time prevented further checking, but I have the feeling that there are more than four schools involved in Distributive Education and the sales training that goes with the program. This, of course, is a vocational offering by its very intent and purpose. The on-the-job training under school supervision, in those communities where it is a part of the school curriculum places more young people in steady jobs than any single school department.

Machine Shop is a curricular offering in three schools, Printing in two schools, Sheet Metal in one, Electronics in three, Welding in three, Electricity in one, Aircraft Engines, Aircraft Mechanics, and the Building Trades in one school.

As we look back over this brief listing of offerings in the vocational curriculums of our 14 largest schools, one point is apparent. There is no similarity of offerings, no real established program of vocational education, but rather a hodge-podge of offerings which make it impossible to determine the thinking behind each courses place in the curriculum, or its need in the community. We seem to agree that in Industrial Arts programs, Homemaking, Vocational Agriculture programs, and in Business Education, there is a need for training in each community. Beyond this there are few common characteristics or courses in the vocational curriculums of Montana's larger schools.

VOCATIONAL EDUCATION IS A PHASE OF EDUCATION WHICH HAS BEEN LITTLE UNDERSTOOD AND BARELY TOLERATED BY MOST OF US IN SCHOOL ADMINISTRATION. WE HAVE BEEN BUSY TRYING TO DO A GOOD JOB IN PROVIDING BASIC EDUCATIONAL SKILLS AND PREPARING YOUTH TO BE SUCCESSFUL IN COLLEGE.

We know that approximately six out of every ten of our youth will not enter college. We know that these six will enter the labor market or become full time homemakers. We offer opportunities for young women to become homemakers through classes in grades seven through twelve, but the educational opportunities we have provided for training for employment have been non-existent, very limited, or very unrealistic.

There are, of course, agencies other than the public schools which provide skills useful in obtaining employment. Private schools, the military, post high school institutions, and on-the-job training give some the experiences and skills required for employment. But the public schools have to play a major role in the over-all program of preparation for employment.

Employment conditions are changing. Greater skills are needed in most occupations for a person to have much of an opportunity for employment. This calls for more effective vocational education and for training programs for out-of-school youth and adults as well as in-school youth.

J. Chester Swanson, Professor of School Administration at the University of California, and Director, Administrative Staff Panel of Consultants on Vocational Education states that "For vocational education to serve adequately, the people of our country , the following must prevail:

1. School administrators must recognize the need for vocational education and have knowledge concerning the nature of a program which can adequately serve the people of their community. It cannot be merely a program for second class citizens academic or social. It must be geared to realistic employment opportunities, taught by teachers who are acknowledged masters of their occupations, and evaluated constantly in terms of the job placement of those who complete training and their ability to succeed on the job.

2. Vocational training should be provided in more schools, for more occupations, and extended into post high school programs. The community, management, labor and employment services must take some responsibility and perform some services. Schools alone cannot provide an adequate program.

3. The traditional occupational categories should be replaced by broader areas of service. Vocational education is not primarily to serve occupations or industry. It is primarily to serve people.

Vocational education must be made available to all people who have the need, the desire, and the ability to benefit from such instruction. Benjamin C. Willis, General Superintendent, Chicago Public Schools and Chairman, Panel of Consultants on Vocational Education, recommends the following categories:

1. Occupational training for youths in high school who are preparing to enter the labor market or to become homemakers. This pre-employment training is normally given as a part of the regular high school program. Under present patterns, the student spends at least half of his school time in academic or cultural subjects and one half in technical subjects related to the occupational training, thus receiving a better basic education and preparation for citizenship. Among the specific recommendations are the following:

    a. Pre-employment training programs should be developed for distributive occupations in addition to the present cooperative work-school programs.
    b. Education for the vocation of homemaking should replace the currently used terms of vocational home economics and general home economics as they are now used to describe high school classes.
    c. Standards should be developed for separate classes in business education which train for employment in office occupations, as distinguished from those which train for personal use of these skills.

2. We need vocational training redirected to better serve these high school youth with special needs. New programs of vocational education should be added to lead to employment in jobs known to exist, for youth who cannot profit from instruction in the traditional programs. Appropriate vocational guidance of practical significance must be made available to such youth. Cooperative (school-work) programs should be organized wherever possible.

3. Occupational training for youth and adults who have completed or left high school and are spending full time in preparing to enter the labor market. Some of these students have completed the normal academic program of high school subjects. Some have completed a high school vocational curriculum and desire more advanced or different vocational training. Other students have not yet completed the high school curriculum but can demonstrate their ability to benefit by training in a post high school program. Post high school curriculums include training for a wide range of occupations. Office occupations, trades, industrial jobs, agriculture, health services, food services, distributive occupations, and the technologies are examples of some of the fields for which training is now being offered.

4. Occupational training for youth and adults who are employed and who need training or re-training to achieve employment stability. These youths and adults are returning to school to receive training to up-grade and up-date their skills, to learn new skills, or to supplement other training activities. Except in periods of emergency this has been largely up-grading of skills in the

occupation in which the student is working. In the future, this type of program may expand most extensively to provide retraining for another occupation as a result of unemployment, or in anticipation of displacement.

5. Services and facilities to assure quality in all vocational and technical education programs. The preparation of teachers, the preparation of instructional materials, research studies, occupational information, and vocational curriculum should permit a high school student to continue the achievement of basic educational skills, training for leadership and growth as a citizen. The vocational curriculum should help the youth who is not going to college to succeed in his next venture in society, just as the academic curriculum helps the youth to succeed who goes to college.

Vocational education can no longer be merely tolerated as a minor school activity. It is a major part of our national security and well-being. It should be administered and operated by our public schools. If the public schools don't provide this training, then other agencies will step in and do it. But it would be more expensive to our society, and not as effective in reaching the people.

At the high school level a re-definition of "vocational" education is needed so that the three major groups of students in the Montana schools may be put in their proper perspective: 1. Those who plan to enter college for the professions; 2. Those who will choose technical fields requiring two or three years beyond high school; and 3. Those who will enter occupational work either before or after graduation from high school. The tendency is to apply the vocational tag to all of the third group, and some of the second, when in reality it applies to all three.

Two major ideas seem to have merit for improving the program of vocational training in the public schools. The first would limit the vocational program primarily to the eleventh and twelfth grades. Few subjects below the eleventh grade can be justified as anything except basic or general education. I would, of course, make an exception for students who are potential drop-outs. Some, particularly the over age pupils may be ready for a vocational committment at a grade below eleven. The program would be available to about half the students who enter high school, including the potential drop-outs.

The second major idea calls for a fundamental reconstruction of vocational or occupational specialization in high school. The existing program is a splintered patchwork of courses which, with the exception of a few schools, fails to give more than a small fraction the rich and comprehensive experience that belongs to many whose wishes and ambitions and needs are now so sadly neglected.

There are limitations on the degree of skill or competence that can be acquired at the high school level. There are several limitations in our state on the number of communities with a high enough student population to make a complete vocational program feasible. I believe it goes without saying that our hope lies in the establishment of programs in our metropolitan centers, with the schools being open on an area, or perhaps a state wide basis to pupils from communities where such educational services are not available.

The determination of what an adequate vocational program for Montana should offer the youth of our state in the way of curriculum offerings will require a great deal of study. It must of course provide training for the type of employment that this state offers to its young people. In such a vast expanse of area it would without doubt vary from one section to the other.

I am certain that those involved in educating our young people all agree that the present program of vocational training in Montana schools leaves much to be desired. Educational advancement is traditionally slow in coming. In the case of vocational education, the retraining of those who are unemployed due to automation, and the reduction of drop-out in our schools, tradition will have to be changed. The 1970's will be too late.

VOCATIONAL COURSES IN 14 OF MONTANA'S LARGEST HIGH SCHOOLS

ANACONDA

Business Education
Home Economics
Woodshop

BILLINGS SENIOR

Business Education
Home Economics
Woodshop
Machine Shop
Vocational Agriculture
Distributive Education

BILLINGS WEST

Business Education
Home Economics
Woodshop
Drafting (2 years)
Distributive Education

BOZEMAN

Business Education
Home Economics
Woodshop
General Shop in 4-6 Basic Areas
  1. Electricity
  2. Gas Motors
  3. Welding
  4. Woodworking
  5. Metalworking

BUTTE CENTRAL

Business Education
Woodshop

BUTTE PUBLIC

Business Education
Home Economics
Woodshop
Carpentry
Auto Mechanics 1 and 2
Machine Shop
Vocational Machine Shop

GLENDIVE

Business Education
Home Economics
Woodshop
Agriculture

GREAT FALLS

Business Education
Home Economics
Woodshop
Machines 1 and 2
Printing 1 and 2
Electronics 1-2-3-4-5-6
Drafting 1-4
Distributive Education

HAVRE

Business Education
Home Economics
Wood Shop

HELENA

Business Education
Home Economics
Drafting (2 years)
Aircraft Engines
Aircraft Mechanics
Auto Mechanics
Welding
Shop Mechanics
Diesel Engines
Electronics
The Building Trades

KALISPELL

Business Education
Home Economics
Woodshop
Vocational Agriculture
Auto Mechanics
Metal Shop
Drafting (2 years)
Graphic Arts (Printing)

LIVINGSTON

Business Education
Home Economics
Woodshop
Vocational Agriculture

MILES CITY

Business Education
Home Economics
Woodshop
Vocational Agriculture
Auto Mechanics
Electronics

MISSOULA

Business Education
Home Economics
Woodshop
Vocational Agriculture
Auto Mechanics

THE PROGRAM OF PRACTICAL ARTS

by

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The underlying educational theory of modern Practical Arts is not a special, separate group of educational concepts, but is rather an extension or special interpretation of those widely accepted educational doctrines which are distinctly democratic, social and pragmatic. It is based upon the specific economic and social needs of the citizens of our society. It is concerned with the individual's growth and adjustment under modern economic conditions and with the betterment of these conditions. It has psychological, moral and spiritual aspects as well as economic and social features. Because the practical arts have been an evolving phase of modern education, its philosophy has exhibited a shifting of emphasis and a continuous revision of its formulations and terminology. While both the practical arts and vocational education have kept step with the changing theories of education in general, each has had its own characteristics of basic theory.

The practical arts has its roots in the educational theories of the Renaissance and the Reformation, and in the work of Comenius, Locke, Francke, Rousseau, Pestalozzi, Fellenberg, Frobel, Cygnaeus, Della Vos and Salomon. These educational thinkers and reformers possessed in common one fundamental notion; namely, that children learn best through active participation in concrete experiences which have to do with the phenomena of their physical and social environment. This is the fundamental concept underlying the thinking of both the Renaissance and the modern advocates of educational handwork. Bellfield, Hamm, Butler, Bennett, Richards, Bonser, Russell, Dewey and all others who have been strong advocates of practical arts have stressed the belief of modern theories of education which emphasize as means of learning the importance of activity; dynamic, constructive experience; and problem solving, as contrasted to passive learning and vicarious experience.

I. What are the Practical Arts? The practical arts are as old as civilization itself. In an economic sense, they consist of those activities through which the natural resources of the earth are secured, processed, distributed and used to meet the physical and material needs of men--food, shelter, clothing, defense, recreation and the like. Behind these activities lies basic necessity. Their performance involves the accumulative skill and know-how, as well as the ignorance and superstition of generations. These activities are practical because they serve basic human needs, and when they are well done, they are an art.

II. The Practical Arts in Education. For educational purposes, the practical arts may be thought of as a study of the tools, materials and processes employed by man in securing, modifying, distributing and using the resources of the earth in meeting his physical and material needs. As they are commonly organized for general educational purposes, the practical arts include: (1) General Agriculture;

(2) Industrial Arts; (3) Commercial Education; and (4) General Home Economics. Because of the concrete nature of these activities, their wealth of content, their economic importance and their appeal to youth, they have come to be regarded as essential elements in a well-rounded program of general education.

Although every person living in modern society engages to some extent in the practical arts, these activities have become highly specialized in our economic life. Today, a majority of our labor force is employed in occupations of a practical arts nature--in the production of raw materials, in manufacturing and processing of these materials, and in the collection and dispersion of finished products. The home is the center around which the consumption of most of the products takes place, and all persons are consumers. As defined here then, the practical arts include skills and knowledge that should be of value to every boy and every girl in the school regardless of their occupational choice.

III. Vocational Education. The four common practical arts subjects each have vocational counterparts in our schools. They are (1) Vocational Agriculture; (2) Vocational Industrial Education; (3) Distributive Education; and (4) Vocational and Home Economics. Their purpose is to prepare people for effective employment in agriculture, industry, business and homemaking, and to increase the efficiency of those already so employed.

IV. Objectives of the Practical Arts. General Agriculture should develop an appreciation of the place and importance of agriculture in our economy, and provide exploratory experiences leading to sound choices among those later entering vocational agriculture. It belongs in the early years of high school and should be provided for city as well farm youth, boys and girls alike.

Industrial Arts seeks to develop an interest in, and an understanding of, industry; consumer knowledge and appreciation; skill in the care and use of common tools and materials; knowledge and understanding of drawing--the language of industry; safety attitudes and habits; and to provide exploratory experiences that will aid in the selection of occupations in industry.

Commercial Education, the general part of business education is concerned with developing a knowledge and appreciation of common business practices; basic skills and knowledge for personal use, and with providing exploratory experiences leading to wise choices of careers in business.

The distinction between general and vocational Home Economics is not as sharp as that existing between the other practical arts subjects and their vocational counterparts. General Home Economics is concerned with the development of the knowledge, attitudes, appreciation and skills necessary for happy and successful home and family life. Unlike the other vocational subjects, it would be impossible to enroll too many in these courses.

V. Some Basic Concepts Underlying Practical Arts Education.

The first concept - Basically the practical arts are no different from any of our other school offerings. Our controlling purpose should be the education and development of young people to take their place in society. In this respect, the practical arts are no different from the English, mathematics, science, art of other departments of the school. The facilities for these activities should be designed with one basic purpose in mind--the most effective and economical education of our young people. We have tried for too long to duplicate what business, industry and agriculture do. Education and production are two different things. The practical arts and vocational education need teachers as well qualified professionally as any other area of the school. Skill and competence within the practical arts is not enough; we need many more teachers with advanced degrees.

The second concept - Vocational and technical fields have intelligence floors just as do the professions, below which an individual cannot fall and still be successful in the field of work. The old concept that the non-academic student can be successful in vocational fields just is not true. This becomes increasingly apparent as business, industry and agriculture become more technical and complex. The dull and borderline student, that is between 70 and 90 IQ, cannot even hope to become a craftsman, technician, salesman or farm manager. The skills and knowledge required in the kinds of jobs he can hold can be learned in two or three weeks on the job. His needs can possibly be met more effectively through some type of practical arts program. While there are floors on intelligence, there are no ceilings in most vocational fields. There is room for all levels of intelligence in nearly all fields of work.

The third concept - The size of a high school will determine to a large degree the extent of offerings in specialized vocational fields. The President's Commission on the Study of Vocational Education stated that no school with an enrollment of under 2000 students could offer vocational education effectively. While the size of a school will tend to limit the feasibility of vocational offerings, practical arts offerings are still a possibility. More of the specialized vocational-technical work will have to be moved to a post-high school level.

The fourth concept - If vocational education is to be effective, in some way we have to erase the historical stigma that has been attached to many vocational fields. This may mean a change in the title of vocational programs.

President Gardner of the Carnegie Corporation stated that a society that scorns excellence in plumbing and tolerates shoddiness in philosophy, because it is an exalted occupation, will have neither good philosophy nor good plumbing. Neither its pipes nor its theories will hold water.

The term "vocational" has been used in connection with penal and correctional institutions and schools for the retarded. The stigma attached to vocational education has its origin nearly two thousand years ago in the Code of Hammerabi. The laws of Babylonia allowed masters to apprentice slaves. We also need to develop facilities for both the practical arts and vocational education that are just as attractive as any other facilities in the school.

The fifth concept - The majority of our young people will find employment opportunity in business, industry or agriculture--not in professional fields. Nearly eighty per cent of Montana young people think in terms of professional occupations as employment opportunity. Only eleven per cent of Montana's labor force are employed in the professional fields. Twenty-one per cent of our labor force are farmers, twenty-two per cent are employed in business areas, and thirty-two per cent in industrial occupations. We must develop quality practical arts programs to give young people an opportunity to explore various fields of work and to help them develop interest in areas in which there is real employment opportunity.

Montana has not kept pace in employment growth. Our increase in our total labor force for the past twelve years has been less than twenty-one per cent. All of the southwestern states and Florida, on the other hand, have had a labor force growth of better than forty-two per cent. North Dakota, South Dakota, Wyoming, Idaho and Washington have all surpassed Montana in terms of growth of the labor force. If this trend continues, we will have to continue to export young people to other states. Our rate of economic progress will depend in considerable measure on the quantity and quality of our available skilled and technical manpower.

Our employment practices have changed in practically all areas in the last ten or fifteen years. As an example, at one time the technician came up through the ranks--laborer, semi-skilled, skilled and finally the technical level. Today, we must prepare young people to enter directly into the highly-skilled and technical fields. For this reason, we must recruit qualified young people for business, industry and agriculture through comprehensive practical arts programs, and then must give them the highly-skilled ahd specialized training needed in vocational fields.

In conclusion, the practical arts must play an ever-increasing role in helping young people to develop an interest in business, industry and agriculture; to develop common skill and knowledges and to develop a foundation upon which specialized skills and knowledges can be built in vocational programs.

3

A SUMMARY AND INTERPRETATION OF A STUDY OF 1958 MONTANA HIGH SCHOOL GRADUATES ATTENDANCE IN INSTITUTIONS OF HIGHER EDUCATION

by William Aubert

This is a summary of a four year follow-up study of 2,682 Montana high school 1958 graduates who enrolled in college and a study of their retention in college. The report contained 6,928 graduates from 173 public secondary schools and 16 non-public schools, or 99.7 per cent of all graduates. The total college enrollments for the 1958 graduates (2,682) consisted of 1,445 men (53.5%) and 1,237 women (46.5%). The original study was made by Dolf Jennings, Director of Guidance and and Counseling Service, State Department of Public Instruction, Helena, Montana.

The data for the original study was secured through the assistance of school administrators and guidance personnel from all the public schools in Montana and from sixteen non-public schools.

The information secured was analyzed on the basis of size and type of high schools, and on the basis of types of colleges attended. This study was also followed up by Mr. Jennings and his staff in that they attempted to determine the status of students that dropped from college, changed enrollment between colleges, and the reasons for leaving college. All colleges listing students were requested to report on retention and grades at the end of the first registration period, and at the end of the year.

School groups in 1958 were classified according to size: 0-125, 126-375, 376, and as college towns, and non-public schools. In 1962 these groups were re-classified for size: 0-75, 76-150, 151-300, 301, and as college towns, and non-public schools. Secondary schools in college towns were considered along with the junior college towns. Non-public schools were considered as one group, without regard to enrollment.

This report is largely limited to the attendance phase of the 1958 Montana high school graduates at college. Reasons for drop-outs are not fully documented. Some analysis is made of success in college according to the size of high school and rank in grade. Graduates of two-year teacher training institutions and nurses are considered as drop-outs and not as graduates in the statistics.

Information in the first report of the 1958 graduates indicates that a majority of the graduates enrolled in Montana institutions, which does not hold with the frequently heard statement that: "Most of our top students go to college out-of-state". A total of 550 or 79.5 per cent of those graduating in the top 10 per cent of their class enrolled in college. Of the number, 143 men enrolled in Montana institutions. Eighty enrolled out-of-state. Enrollments for women show 223 from the upper ten per cent of graduates enrolled in Montana colleges, 115 enrolling out-of-state.

College enrollment by graduating classes from Montana high schools for the year following graduation have shown a very consistent pattern during the past seven years. There are some indications that the college enrollment is in an upward trend, in some schools, but the total picture shows little change, in terms of per cent of the graduates enrolling in college. Rather, the increase in number of college enrollments is directly related to the increase in the number of graduates, according to Jennings.

Holding power (retention) of college enrollees, is a factor certainly not to be considered in relation to the student or to the high school and its program alone, according to Jennings. The type of college, how well it meets the expectations and needs of the student, can be considered a definite factor. Transfers of students to other institutions is one form of loss to the college in which the student first enrolls. Information was sought as to the reasons for transfers, but information obtained was rather incomplete. Some of the reasons given for transfer were:

1. Low grades in the first institution.
2. Dissatisfaction with course work.
3. Change of interests.
4. Financial reasons.
5. To be nearer home.
6. To be with friends in other institutions.
7. Necessary for professional programs.

In 1959 2,692 students enrolled in college. During 1958-1959, the first year in college, 30.2% dropped from school. By the end of the second year 47% had dropped from school. By the end of the third year 53.6% had dropped from school. At the end of the fourth year 28% had graduated. Jennings reports that any comparisons or conclusions involving the retention or [illegible] of college programs should not be construed as indications of weakness in any particular size of school or type of higher institutions. Some of the specific factors affecting retention in college includes the following:

1. Geographic location of the college to the home community.
2. Community attitudes toward education.
3. Financial problems of college students.
4. Marriage, particularly for the women.
5. Armed services obligations for the men.
6. Satisfactions or dissatisfactions on the part of the students.
7. Effects of large college enrollments from the local college community, particularly in the Montana teacher training institutions and at the school of mines. These schools function as junior colleges or pretraining programs for professional areas, with many transferring to other institutions for their final training.
8. Necessity for transfer out-of-state for professional programs, as dentistry, medical, or veterinary-medicine type programs.
9. The associate degrees offered by teacher training institutions in Montana. The two-year teacher group discontinuing college for the 1958 graduate group includes ten men and seventy-five women, or 4.0 per cent and 27.0 per cent respectively of teacher training institutions' loss of enrollments.

10. The two and three year programs in nursing offered by a number of institutions, both in and out-of-state. Thirteen women of the 1958 class have completed nurses training this year. A larger number who are enrolled as college students will undoubtedly complete training this year.
11. Terminal programs of the junior college students from the group reported affect the length of college programs.

Data indicated that there is apparently little difference in scholastic aptitude between men and women enrolling in the six units of the University of Montana, as indicated by scholastic aptitude that was available in percentile scores on test data.

English scores on the cooperative English Test, used with entering freshmen at Montana State University, and Cooperative Reading Tests used as a part of entrance tests at two of the teacher training institutions, show a definite superiority for women in the English and Reading areas.

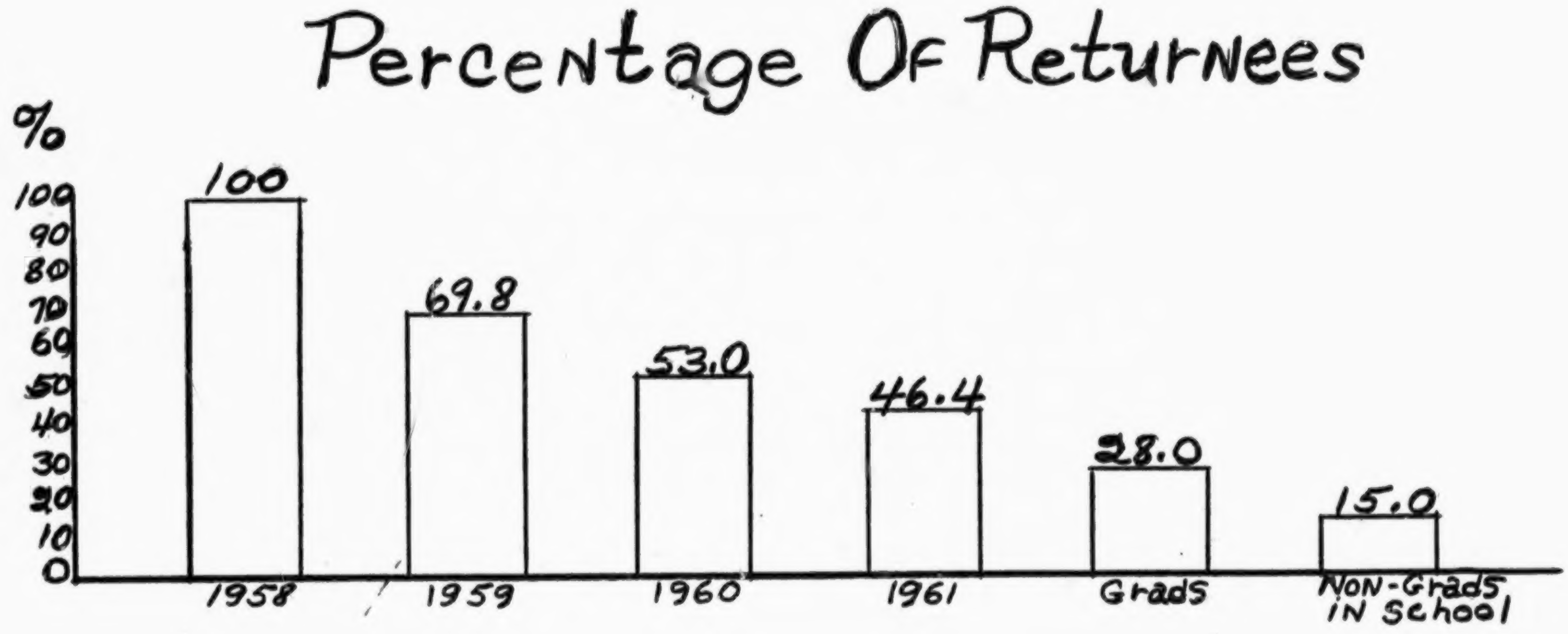
Women, both in high school and college received higher grades than men. This situation is not unique to the 1958 class or to Montana students, as the achievement of superior grades by women is demonstrated by a large amount of research. It probably reflects, rather than higher natural aptitude, differences in peer attitudes about grades in high school, better preparation in English, certainly better work habits, or habits of study and a resultant better foundation for college work. Differences in drive or attitude toward academic work, or a greater desire for approval. Evidence from numerous studies indicates that the differences are based primarily on non-intellectual characteristics.

SUMMARY AND CONCLUSIONS

1. 38.7 per cent of the 1958 Montana high school graduates enrolled in college including 42.4 per cent of the men and 35.3 per cent of the women. Approximately 50 per cent of the graduates attended public universities, with major enrollments in public universities, teacher training institutions and liberal arts colleges.
2. There is a definite need for more and earlier planning concerning the high school program and after high school plans as indicated by:
    a. Excessive drop-outs, particularly from students of small high schools.
    b. Excessive loss of women from the college program as compared with men.
    c. Large numbers enrolling in college from the lower academic half of their class (exclusive of those who enroll in terminal programs), who have not continued their programs.
3. Indications are that many of those discontinuing college are working in jobs similar to those taken by high school graduates and that their brief college training has played little part in improving their job status.
4. College enrollments from Montana high schools tend to increase with the size of school. College drop-out rates of graduates of larger high schools tend to decrease.

5. One hundred two girls with less than a C (2.0) average enrolled in college; 14 are still in school in 1961. Two hundred sixty-nine men entered college with less than a C (2.0) average. Of this group, 85 are still enrolled in college. At least 2 may graduate with honors this year.
6. Approximately 25 per cent of the 1958 group of women enrolled in college in 1958 are teaching in elementary schools in the state in 1961.
7. Approximately one-fourth of the students enrolled in junior colleges have transferred to four-year colleges.
8. A total of 755 students graduated from college in 1962. This is 28 per cent of the total college enrollment in 1958. There were 407 men (28%) and 348 women (28%).

College Retention Of 1958 Montana High School Graduates



THE INDUSTRIAL COMPLEX IN MONTANA AND ITS NEED FOR TECHNICAL AND VOCATIONALLY TRAINED PERSONS

by
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As in so many other things, Montana is a state of contrasts insofar as its industry is concerned. Perhaps they shouldn't be referred to as giants, but certainly some large corporations are represented by having operations within the state. On the other hand, an opposite extreme is illustrated by the many small firms in existence in the state. There does not seem to be much in between.

The primary objective of this paper, then, is to explore more fully the nature of this industrial contrast in an attempt to see what it may offer in the way of future employment opportunities.

The question might well be asked here as to what interest an engineer has in a problem of this nature. Perhaps the stage can be partially set, at least by answering this question in this way.

First, from a personal standpoint, the author has always been interested in the growth and development of Montana. As a native of the state, the desire to live and work here has been strong. But, desire must frequently be tempered by a thing called practicality. If one grows up in Montana and wants to stay here, what can he do for a living? Are there enough jobs available to take care of all who wish to stay or must they look elsewhere for satisfactory employment? The problem is well illustrated by experience with graduates of the engineering division at Montana State College. It is estimated that each year 90 to 95% of the engineering graduates leave the state for employment elsewhere. Because of the interest in job opportunities for engineers, another point must be considered.

A second part of the answer to the question of the engineer's interest in job opportunities centers around the need for an "inventory" of industrial firms in Montana. If an estimate of job opportunities for engineers in the state is to be made, then we must have some idea of the makeup of the industrial segment of the state where many of these engineers might expect to be employed. Such an inventory was made and resulted in the Montana Directory of Manufacturers in 1958 and the first revision in 1963. 1/

1/ State Planning Board, Helena ($1.50)

MAKEUP OF MANUFACTURING INDUSTRY IN MONTANA

Before going further in any discussion of the "industrial complex" in Montana we had better define it more specifically. For purposes of our considerations in engineering, the field was limited to manufacturing concerns as described by the U. S. Bureau of the Budget in its Standard Industrial Classification Manual.

The Standard Industrial Classification includes the following major groups under manufacturing:

"19 - Ordinance and Accessories
20 - Food and Kindred Products
21 - Tobacco Manufactures
22 - Textile Mill Products
23 - Apparel and Other Finished Products Made From Fabrics and Similar Materials
24 - Lumber and Wood Products, Except Furniture
25 - Furniture and Fixtures
26 - Paper and Allied Products
27 - Printing, Publishing, and Allied Industries
28 - Chemicals and Allied Products
29 - Petroleum Refining and Related Industries
30 - Rubber and Miscellaneous Plastics Products
31 - Leather and Leather Products
32 - Stone, Clay, and Glass Products
33 - Primary Metal Industries
34 - Fabricated Metal Products, Except Ordinance, Machinery and Transportation Equipment
35 - Machinery, Except Electrical
36 - Electrical Machinery, Equipment, and Supplies
37 - Transportation Equipment
38 - Professional, Scientific, and Controlling Instruments; Photographic and Optical Goods; Watches and Clocks
39 - Miscellaneous Manufacturing Industries."

Of these 21 major groups, only two, tobacco manufactures and textile mill products are not represented in Montana. The other 19 groups are not, of course, present in equal numbers, either.

The 1963 edition of the manufacturing directory lists approximately 2000 firms in the state. Lumber and wood products make up about half of the group with approximately 1000 firms or operators involved. In terms of numbers of firms, there is an almost even split between logging contractors and milling operations. The next largest group of firms is that one which includes food and related products. There are about 350 firms in this group. Printing and publishing has approximately 130 firms while stone, clay, and glass products; fabricated metal products; and machinery, except electrical, each have approximately 100 firms.

If we consider just the numbers of firms in each manufacturing category, however, we might be led astray. What effect, for example, does size of firm have on our picture of Montana industry? The largest firms in the state, in terms of number of employees, have typically been in production of basic metals, although some relatively large manufacturing operations have developed in wood products, petroleum refining, and food processing. The Census of Manufactures (1954 and 1958) of the Bureau of the Census of the U. S. Department of Commerce was studied in hopes that some light might be shed on the importance of size variations of firms in the state but the data for Montana is so incomplete that no conclusions could be drawn.

THE FUTURE

It was hoped that some trend in employment by these few major employers could be established but such was not the case. About the only basis for comparison which remains, then is opinion based on personal observation.

On this basis we might first examine the production of basic metals. Employment in this industry does not appear to be increasing but, if anything, is decreasing. Job opportunities do not appear to be promising in this industry.

Although employment in one of our larger petroleum refineries may get up to 250 people, the trend in this industry also seems to be towards operation with fewer people. This field, then, would not appear to offer much hope for additional employment.

Lumber and wood products might possibly be one of the bright spots in the picture. However, the demand for lumber has been decreasing in recent years and lumber marketing has been quite slow in recent months. Competition from other building materials has had a considerable effect here. Montana does have large stands of timber, however, and the development of new wood products could have a significant effect on the industry. There is nothing at the moment to indicate when, or if, such developments will come.

The processing of agricultural products might be another bright spot. The traditional pattern here, however, has been to ship the raw materials to major population centers and to then process them for consumption. If this pattern persists, then the majority of processing within the state would be for local consumption, and therefore limited.

This does bring up another interesting possibility, however. What about the manufacturing firms in Montana which exist primarily to serve the needs of the state? Is there a possibility here for significant development?

Growth in manufacturing to serve local needs would appear to be very closely tied to population growth. And how is Montana doing in this respect? Between 1950 and 1960, while the U. S. gained 18.5% in population, Montana was gaining only 14.2%. Furthermore, the Mountain State region's gain of 35.1% was exceeded only by the Pacific region's 40.2%, but Montana's growth rate was sixth out of the eight states in the region. Growth in local market is not keeping up with either the region or the nation.

This lack of local markets can be graphically illustrated by pointing out that the combined population of Montana and the four bordering states of Idaho, North Dakota, South Dakota, and Wyoming, according to 1960 census figures, is less than Chicago, second largest city in the U.S.

CONCLUSION

It is always discouraging to be forced to adopt a negative viewpoint when talking about development of our state, but it is best to be realistic. Certainly, there will be job opportunities in the manufacturing industry in Montana. There will be older people leaving the labor pool. There will be population growth, although at a somewhat slower rate than the rest of the nation. There will very possibly be some new developments in industries associated with Montana. But what does it all mean for the state and opportunity within the state?

All things considered, one is forced to the conclusion that opportunities for jobs in manufacturing in Montana will be quite limited unless there are favorable developments which cannot be foreseen at this time.

AGRICULTURE, AGRI-BUSINESS AND EDUCATION

by

Ray Ozmon, Field Editor, Montana Farmer-Stockman
Presented to the Montana Vocational Association
Billings, April 16, 1963

There may be considerable nostalgis for the self-sufficient family farm of pre-World War II days where the farmer or rancher was concerned mainly with providing beef, pork, milk, eggs and garden vegetables for his family, but that era of agriculture exists only in memory.

This is not to suggest that the day of corporate farms has dawned, for family owned and operated farms and ranches produce a major portion of our nation's food supply. But the family farm has undergone an explosive revolution.

Today's farmer is a businessman. He's producing in large volumes at a low profit margin. A sharp pencil and a set of cost accounting records are as essential to the success of his operation as rainfall. Capital and credit are as important as a tractor. To survive in this highly competitive field the farmer has had to adopt the methods of the time-and-motion study engineer.

Every acre of ground must produce maximum yields of wheat, alfalfa or sugar beets. Every cow in the herd must produce the maximum pounds of beef or milk on the smallest possible amount of feed. A sow that farrows a litter of less than eight pigs won't pay for her keep.

To survive in today's agriculture the farmer must keep abreast of the latest research findings in the fields of soil fertility, animal nutrition, weed and insect control, soil and water conservation and improved crop varieties.

He must know consumer preferences and the demands of the market for which he is producing.

Tractors, combines, forage harvesters, grain drills and tillage implements must perform their specific tasks with speed and efficiency. To the farmer time is money. It can't be wasted.

The new methods and techniques that are being applied to the production of food and fiber have enabled the farmer to today provide for himself and 26 other people, compared to 10 others just 20 years ago. Our agricultural industry is providing 187 million people with the most abundant, nutritious, high-quality diet--and at the lowest cost--in the history of mankind.

The American farmer, of course, did not achieve this miracle of production all by himself. He has been aided by countless dedicated scientists at our colleges, experiment stations and in private industry who are unlocking the secrets of nature. Educators, extension service personnel, soil conservation technicians, publishers and public relations departments of manufacturing firms have helped make the findings of research available to him and have aided him in applying those findings to his operation. Engineers and designers have provided him with the modern tools and implements that power this agricultural revolution. Food processors and distributors have taken the raw materials of the farm and made them available to consumers everywhere.

What opportunities exist for the person who desires a career in this expansive field of agriculture? For those who wish to engage in actual farm production, the outlook is not encouraging. If a person can get his hands on a couple hundred thousand dollars to buy land, machinery, livestock and to erect a set of buildings, he's in business. But anyone with that kind of money could probably find a sound investment that would bring him a greater return on his money.

Present-day agriculture has the highest capitalization per worker of any industry. The price of land in some areas has been inflated way out of proportion to its productive value. The prices of steel, petroleum, rubber and wages have risen steadily over the years. The cost of those things farmers and ranchers must buy has followed the spiral, but the prices growers receive for their wheat, cattle, hogs, milk, wool, lambs and potatoes have not kept pace.

With the possible exception of a few Texas oil tycoons and eastern industrialists who buy a spread in Montana for a hobby or tax write-off, new farmers and ranchers will probably come from the ranks of vocational agriculture students and 4-H club members.

These young people are acquiring the skills and knowledge that are so essential for success in present-day agriculture. Through their project work many are getting the start of a livestock herd or farming enterprise. Some are working in partnership with their parents and will eventually take over the reins of management. But many of these young people will have to look elsewhere for careers and vocations.

A man may have a 2000 acre wheat farm that provides an adequate living for his family, but if that land were divided up among four or five heirs, none of them would have an economic unit. It's possible that research may develop a high value crop that is in great demand which would enable a farmer to make a living off a comparatively small acreage, but at present that is not in the picture for our dryland farming areas.

Of those young people who do become farm operators and managers, only the best qualified will survive. The fantastic efficiency of modern agriculture means that fewer and fewer farmers and ranchers are needed to produce the nation's food supply.

Here in Montana there has been a steady decline in the number of farms over the years. At the height of the homestead era in 1920, there was 57,700 farms in Montana. By 1961 the number had dropped to 31,600. In the past 10 years alone the number of farms and ranches in our state has declined by 5,400.

This decrease in the number of farms could be further accelerated by new breakthroughs in the use of fertilizers and micro elements, livestock nutrition and feed additives, livestock breeding, water conservation, soil conditioning; through new breakthroughs in the development of improved crop varieties and selective weed control chemicals, which could further increase the productivity of our soils.

This could lead to even lower profit margins which would eliminate all but the most efficient producers.

And because growers have had to mechanize to meet rising costs and to reduce the unit cost of producing a bushel of wheat or pound of meat, the opportunities for farm labor have diminished.

The boy who thinks his high school diploma is adequate because he just wants to be a farm worker will find that automatic loaders and stackers have taken over the job of handling hay bales; that electric motors, grinders, forage choppers and augers have made the scoop shovel and pitch fork obsolete; that there are no milk cans to lift because pumps now transport the milk directly from the cow's udder to a refrigerated tank; that land leveling and automatic sprinklers have drastically reduced the demand for irrigators.

While the opportunities in farm and livestock production are admittedly limited, the countless industries, trades and professions that back up the farmers in the field offer the real challenges and opportunities to those who are preparing to enter the labor market.

Twenty percent of Montana's population is engaged in farming or ranching. At the national level the figure is only 8 percent. But fully 40 percent of our labor force is employed in these supporting industries that are directly related to and dependent on agriculture.

There are the farm machinery manufacturers and distributors, feed and seed companies, grain elevators, fertilizer manufacturers, the farm chemical industry, food and fiber processors and distributors, transportation firms that bring the products of industry to the farm and farm commodities to market.

There are agronomists, plant pathologists, plant breeders, entomologists, weed specialists, soil scientists, conservationists, irrigation engineers, surveyors, animal husbandrymen, practicing and research veterinarians, pharmaceutical manufacturers, food inspectors, chemists, nutritionists (both human and animal), educators, administrators, agricultural economists, bankers.

Farmers use tons of concrete to line irrigation ditches and pave feedlots. They need the services of skilled mechanics to repair and maintain their machinery. The numerous electric motors used to operate milking machines, feed grinders and mixers, grain augers and pumps require the services of skilled technicians.

But it's as true of agriculture as of every other aspect of our nation's economy: The unskilled person is, for all practical purposes, unemployable. Only the skilled, highly trained specialist will be in a position to take advantage of the challenging opportunities that exist in these agriculturally-related fields.

And those opportunities are real. Each year the vast complex of industries that comprise the agri-business sector of our economy have a need for many thousands of technically trained people, but our colleges and universities are turning out only a small fraction of that need.

No one denies that agriculture doesn't have its problems, but it is those problems that create the challenges and limitless opportunities that exist in this basic industry.........We need the imaginative brains of economists, marketing experts, public relations people and advertising specialists to move the products of agriculture and industry into consumer channels.

Some might say that if all the problems of agriculture were solved we would be buried under a deluge of farm surpluses. But with the urban and industrial sprawl that's taking place throughout the country and our talent for covering up cropland with concrete, is it not conceivable that we will need all our productive genius to maintain our present level of diet in 1980 when the population is expected to soar to 245 million?

Whenever an agronomic, veterinarian, nutritional or engineering problem is solved; whenever a new product is developed; when a domestic or export market is expanded, jobs are created. People with farm or ranch backgrounds; people who understand the problems of agriculture; people with the proper technical training, are needed to fill those jobs.

MONTANA AGRICULTURE AND ITS IMPORTANCE

by

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INTRODUCTION

Montana is basically an Agricultural state. It is the fourth largest state in the Union with 145,736 square miles. In 1959, 69 percent, or about 64 million acres of the total of more than 93 million acres was in farm land.

Montana had a labor force of 248,073 in 1960 of which 93.2 percent or 231,270 were employed. The number employed in Agriculture which ranked second in number only to those employed in wholesale and retail goods was 39,479. 47,094 were employed in wholesale and retail goods. The third largest employed group was the 21,013 employed in transportation, communication and other public utilities.

The number of farms in Montana has decreased from approximately 42,000 in 1940 to 29,000 or 30,000 in 1959, depending on the classification used; a decrease of 13,000 farms in a 19 year span. During this same period of time the total number of acres in farm land increased by approximately 17½ million acres.

TABLE 1: Some facts about Montana farms. (Approximate figures).

Year	No. of Farms	Total Acres in Farms	Total Value of Land and Buildings	Average Size of Farms	Average Value per Farms
1940	42,000	46,452,000	$ 350 mil.		
1950	35,000	59,247,000	999 mil.	1,689 A.	$28,475
1954	33,000	61,469,000	1,476 mil.	1,859 A.	$44,653
1959	29,000	64,081,000	2,223 mil.	2,213 A.	$76,761

Note: The data in this chart was obtained from the Statistical Abstract of the United States. U.S. Department of Commerce, Bureau of the Census. Washington, D.C., 1962. 83rd edition.

The number of Montana farms by size in 1959 were 675 under 10 acres; 1,690 farms from 10 to 49 acres in size; 1,353 farms from 50 to 33 acres in size; 2,451 farms from 100 to 179 acres in size; 1,407 farms from 180 to 259 acres in size; 3,531 farms from 260 to 499 acres in size; 4,671 farms from 500 to 999 acres in size; and 13,181 farms of 1,000 acres and over.[1] The definition of a farm that was used is if $250 gross income was realized from farm products on land under 10 acres in size and $50 gross income from land of 50 acres and over.

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[1] Statistical Abstract of the United States. U.S. Department of Commerce, Bureaus of the Census. Washington, D.C., 1962. 83rd edition

Out of the approximately 29,000 farms in Montana in 1959, 8,820 were cash grain; 862 were classified as other field crops; 20 as vegetable farms; 91 as fruit and nut; 1,105 as dairy; 112 as poultry; 10,874 as livestock farms and ranches; 1,438 as general farms; and 5,283 as other farms.

FARM INCOME AND EXPENDITURES

Cash receipts from Montana farms during 1961 totaled $382,335,000. The receipts were $422,986,000 for 1960 and $460,903,000 in 1958.

The value of cash receipts reported for 1961 included Government payments of $17,041,000. Of the $365,294,000 total receipts from marketings (not including government payments), $150,079,000 or 41.1 percent of the cash receipts were from crop marketings and $215,215,000 or 58.9 percent from the sale of livestock.

Of the total cash receipts from marketings during 1961, 45.5 percent or $166,048,000 was from the sale of cattle and calves, 3.9 percent or $14,142,000 was from the sale of dairy products, 3.2 percent or $11,775,000 was from the sale of sheep and lambs, wool had a total sales of $6,719,000 or about 1.8 percent of the total sales, hog sales were 2.4 percent of the total at $8,856,000, egg sales totaled $5,450,000 for 1.5 percent of the market, 0.1 percent or $475,000 was from the sale of chickens and 0.5 percent or $1,750,000 was from other livestock and livestock product sales.

The $103,615,000 from the sales of wheat was 28.4 percent of the total market, barley sales were next high for crops at 4.6 percent or $16,788,000, 2.8 percent or $10,325,000 was from the sale of sugar beets, $5,965,000, or 1.6 percent of the sales was from hay, 0.8 percent or $2,704,000 was from the sale of potatoes and 2.9 percent was from the sale of other crops. Included in this last category was the $999,000 from the sale of fruits and berries.

Choteau County led all counties in total receipts from marketings at $19,528,700. Choteau and Hill counties led in receipts from crop sales with $14,524,400 and $10,901,100 respectively, while Beaverhead and Fergus counties led all counties in receipts from livestock and livestock products sales at $8,948,600 and $8,761,000 respectively. The central district led in receipts from livestock and livestock products at $41,719,500.

The gross cash receipt per farm in Montana during 1961 was $12,099 and in 1960 this figure was $13,218. Meagher county led all counties with a value of $33,538 per farm and Lincoln county was the lowest with $2,819 per farm gross cash receipts. Other counties with cash receipts below $10,000 include: Flathead at $4,592; Lake at $5,615; Mineral at $4,789; Missoula at $5,522; Ravalli at $6,089; Sanders at $4,442; Dawson at $9,267; McCone at $9,058; Silver Bow at $5,509 and Carbon county at $8,051. Beaverhead county was the second highest in gross cash receipts at $31,796 cash receipts per farm. Assuming that the net income is going to be the very unrealistic figure of ½ of the gross income, the farm income for farmers in some of the counties in the state is going to be very low.

Not only is the income from Montana farming and ranching large, but the expenditures are also large. During 1961 Montana farm production expenses amounted to approximately $287.9 million dollars,[2] leaving a net income of about $94,435,000 from the total cash receipts of $382,335,000. The expenditures were as follows: Feed, $25.2 million dollars; livestock, $12.5 million dollars; seed $4.4 million dollars; fertilizer, $16.3 million dollars; repairs and operation of capital items, 63.3 million dollars;[3] miscellaneous, $32.2 million dollars; hired labor, $29.2 million dollars; total current operating expenses, $183.1 million dollars; depreciation and other consumers of farm capital, $60.2 million dollars; taxes on farm property, $26.0 million dollars; interest on farm mortgage debt, $11.8 million dollars; and net rent to non-farm landlords $6.8 million dollars, for a total production expense of $287.9 million dollars.

Montana farmers during 1961 realized a gross income per farm of $12,933.[4] This figure was about $1,000 less per farm than for 1958 and about $2,500 less than for 1962. The realized net income per farm for 1961 was approximately $3,824. For 1958 and 1962 the per farm net income was $6,087 and $5,592 respectively. The figure for 1962 was up 46 percent from 1961. The July, 1962 issue of the Farm Income Situation has this to say about realized net income for farmers in the United States. "Realized net farm income of farm operators has tended to decline from the record high of $17.3 billion dollars reached in 1947. Farm production expenses, which took about half of each dollar of realized gross income in 1947, have taken about 2/3 of each dollar of income in recent years. In 1961 realized net farm income was $12.8 billion dollars, $1.1 billion dollars more than in 1960, and the highest since 1953.

At this point it might be of interest to compare the average annual wage of the U. S. farm and the non-farm worker. During 1961 the average annual farm income was $2,268 dollars, while the average annual wage of the factory worker was $4,802.[5] The northeast region of the United States reported a non-farm per capita income of $2,175 and a farm per capita income of $1,218. The East North Central region a non-farm income of $2,182 and a farm income of $1,082. The West

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[2] Farm Income. A supplement to the Farm Income Situation for July, 1962, August 1962. U.S.D.A. Economic Research Service, pp. 40-65.

[3] This figure includes the repair and maintenance of buildings, repair and operation of motor vehicles and other machinery, and petroleum fuel and oil used in the farm business.

[4] This figure was taken from the Feb., 1963 issue of the Farm Income Situation and varies from the $12,099 figure estimated in the Montana Agriculture Statistics.

[5] Farm Income Situation, Economic Research Service, United States Department of Agriculture. July, 1962.

North Central region a non-farm income of $1,861 and a farm income of $957. The South Atlantic region a non-farm income of $1,521 and a farm income of $879. The East South Central region a non-farm income of $1,366 and a farm income of $751. The West South Central region a non-farm income of $1,577 and a farm income of $1,121. The Mountain region (this region includes Montana) a non-farm income of $1,725 and a farm income of $1,353. Finally the Pacific region a non-farm income of $2,215 and a farm income of $2,575, the only region to report a higher farm income per capita than non-farm income.

TRENDS IN AGRICULTURE

The past half century has seen some very definite and pronounced changes and trends in agriculture. A few of these trends have been discussed previously, such as fewer farms and farmers, but increased acreage per farm. The total acres of harvested land in the U. S. have not changed too much, however, through mechanization there has been less land used for feed for power (horses) and more acres used for consumer goods. The amount of labor used to produce these goods has decreased. In 1940 the index of labor was 122[6/] and in 1960 it was 63. There has been an increased use of capital on farms in recent years. The index of machinery and power in 1910 was 28;[7/] by 1960 this was increased to 142. Fertilizer and lime had an index of 20 during 1910, but by 1960 this index had increased to 192. The index of feed seed supplies was 22 in 1910 and it increased to 149 in 1960. However, the total inputs have not changed too much in quantity only in composition. The index of total inputs in 1910 was 82 and by 1960 it had increased to 102. Total outputs on the other hand have increased substantially from 61 in 1910 to 129 in 1960, thus it can be readily seen that the ratio of total outputs to total inputs has been increasing and will probably continue to do so with increased technology and mechanization.

CONCLUSION

From the information presented today, it can be safely said that agriculture is no less important today in Montana and in the United States economy than it has been in the past.

In spite of the decrease in the number of farms and farmers, farming still remains our State's and out Nation's largest industry. It employs more people and spends more money for production than any other single industry.

In conclusion I would like to quote a portion of President Kennedy's Message to Congress on Agriculture on March 16, 1961. "As the provider of our food and fiber, American Agriculture is a highly successful and highly efficient industry. In no other country, and at no other time in the history of our own farm economy, have so many people been so well provided with such abundance and variety at such low real cost........ In short, our farmers deserve praise, not condemnation; and their efficiency should be cause for gratitude, not something for which they are penalized."

[6/] 1944-1949 base.

[7/] This and the following indexes are based on 1947-1949 averages.

"YOUTH SPEAKS FOR VOCATIONAL EDUCATION"

by

Laury Eck, Montana State College Student

Billings, April 16, 1963

"No, I'm not very good in school. This is my second year in the seventh grade and I'm bigger and taller than the other kids. They like me all right, though even if I don't say much in the classroom, because outside I can tell them how to do a lot of things. They tag me around and that sort of makes up for what goes on in school."

"In school we've got to learn whatever is in the book and I just can't memorize that stuff. Last year I stayed after school every night for two weeks trying to learn the names of the Presidents. Of course, I knew some of them, like Washington and Jefferson and Lincoln, but there must have been thirty altogether, and I never did get them straight. I'm not too sorry, though, because the kids who learned the Presidents had to turn right around and learn the Vice-Presidents. I'm taking the seventh grade over, but our teacher this year isn't so interested in the names of the Presidents. She has us trying to learn the names of all the great American inventors!"

"I guess I just can't remember names in history. Anyway, this year I've been trying to learn about trucks because my uncle owns three and he says I can drive one when I'm sixteen. I already know the horsepower and number of forward and backward speeds of twenty-six American trucks, some of them diesels, and I can spot each make a long way off. It's funny how a diesel works. I started to tell my teacher about it last Wednesday in science class when the pump we were using to make a vacuum in a bell jar got hot, but she said she didn't see what a diesel engine had to do with our experiment on air pressure so I just kept still. The kids seemed interested, though. I took four of them around to my Uncle's garage after school and we saw the mechanic, Gus, tear a big diesel truck down. Boy, does he know his stuff!"

"I'm not very good in geography, either. They call it economic geography this year. We've been studying the imports and exports of Chile all week, but I couldn't tell you what they are. Maybe the reason is I had to miss school yesterday because my Uncle took me in his big trailer truck down state about 200 miles, and we brought back 10 tons of stock to the market. He had told me where we were going and I had to figure out the highways to take and also the mileage. He didn't do anything but drive and turn where I told him to. Was that fun! We made seven stops, and drove over 500 miles round trip. I'm figuring now what his oil cost, and also the wear and tear on the truck--he calls it depreciation--so we'll know how much we made. I even write out all the bills and send letters to the farmers about what their pigs and beef cattle brought at the stockyards. I only made three mistakes in 17 letters last time, my aunt said, all commas. She's been through high school and reads them over. I wish I could write school themes that way. The last one I had to write was on 'What A Daffodil Thinks of Spring', and I just couldn't get going. Even in shop I don't get very good grades. All of us kids made a broom holder and a bookend this term and mine were sloppy. I just couldn't get interested. Mom doesn't use a broom anymore with her new vacuum cleaner, and all our books are in a bookcase with glass doors in the parlor. Anyway, I wanted to make an end gate for my uncle's trailer, but the shop teacher said that meant using metal and wood both, and I'd have to learn how to work with wood first. I didn't see why but I kept still and made a tie rack at school and the tail gate after school at my uncle's garage. He said I saved him ten dollars. Dad says I can quit school when I am fifteen, and I am sort of anxious to because there are a lot of things I want to learn how to do, and as my uncle says, I'm not getting any younger."

The above paraphrased monologue by Stephen Corey is more than merely an interesting story. Although amusingly written, it strikes deep and hard at a fundamental flaw in American democracy. American democracy is a way of living. It is a tremendous faith in man's right to reach his upmost capabilities. In America, we do not separate our work from our culture. Perhaps the most important watch-word of our democracy is opportunity--not identical opportunity, but equal opportunity. The democratic ideal in education envisions opportunity not only for the more able, but also for the average and mediocre pupils. As Orlando Furno, specialist on state school finance systems, stated; "Increasing educational opportunities through a foundation program established at a relatively low level is not the answer; the answer lies in a much bolder approach--providing each child in the nation educational opportunities of such depth and scope that he can develop his potential to the fullest." Viewed in this light, the goal of equal educational opportunities for all emerges an an economic and political necessity. With this goal in mind, it is easy to see that vocational education must be an integral and necessary part of a broadly based educational system which offers every person the opportunity to achieve his full potential.

Well, what is vocational education as I conceive it? In short, vocational education is teaching people how to work effectively. It really includes much more. Vocational training must be of the mind as well as hands, so the student will know why he does everything. New problems are constantly arising, with no two alike, and even tools are changing continuously. The course, therefore, must train the student to think. The furtherance of any vocational training program implies that the school will be concerned with youth of all levels of ability and academic inclination, but particularly with the 70 percent of the boys and girls who will go to work in the community immediately upon high school graduation, if not before. In any event, I think it is logical to conclude that for this 70 percent educational opportunity is vocational and not college preparatory education.

What kind of vocational education programs are being provided today? We can get a reasonable accurate indication through a comparison of per pupil expenditures for vocational and academic education from the United States Office of Education, Division of Vocational Education, 1961.

This source reveals that the annual per pupil expenditure for academic education was 383.42 while for vocational education the figure was only $6.58. This low expenditure level almost always is reflected in generally inadequate vocational programs because of a "cost-quality" relationship. Woollatt's study, "Cost-Quality Relationship on the Growing Edge" revealed that as the expenditure level increased, quality as measured in the realm of basic skills, areas of knowledge, special aptitudes, and behavior patterns also increased. A summary of 26 different surveys published in the book Public School Finance, 1960, showed that the relationship between cost and quality was strong. The low expenditure level of $6.58 per pupil is made even more insignificant because the per pupil cost of effective vocational education must be higher than other programs in the public school due to special equipment, travel costs of teacher supervision of "off-campus" training activities, and enrollments per class not exceeding 20 pupils.

One important question immediately comes to mind: "With so limited funds, how many schools actually offer any vocational education at all?" The answer can be found in the Office of Education Publication Number 80020. It was discovered that of all the schools surveyed only 5 percent offered distributive education courses, 9 percent offered trade and industrial courses, 47 percent offered home-making courses, and 45 percent offered agriculture courses. This lack of adequate vocational programs is made even more acute in Montana because of the large number of small school districts that cost disportionately more to operate. A national study made a few years ago revealed that schools having fewer than 40 pupils cost 38 percent more per pupil than schools having over 200 pupils; high schools having fewer than 40 pupils cost 74 percent more per pupil than schools having more than 600 pupils. As James Conant puts it in his book The American High School Today: A common practice in small high schools in an effort to deal with the (financial) problem is to require all students regardless of ability or interest, to take an academic program. The non-academically talented student is seldom able to follow vocational goals and to develop general interests. Although he constitutes a majority of the student body, he is obliged to study courses which at best only the top quarter of his class can pursue with profit." In general, what happens to those individuals who are not provided with an adequate vocational education? The most important problems these individuals have caused can be grouped into three broad categories: (1) dropouts, (2) unemployment, (3) crime. Let us take a brief glance at each.

Perhaps the most crippling failure of American education is that of dropouts. Of every ten boys and girls in the 5th grade only six stay through the 12th. The fact that some of America's most brilliant youth drop out was shown by an Iowa study which revealed that 200,000 of last year's dropouts had an IQ of more than 120. Saturday Evening Post of March 10, 1962, crystalized the gist of the matter in a few short words when they stated: "We waste more than a million kids a year. As we once wasted natural gas and forests and topsoil, today we waste our most valuable resource--the productive brains and muscles, the creative power of young imaginations and emotions. We waste them because we neither keep them in school or give them jobs." What is wrong with the present programs? Why do so many drop out of school? It is often discovered that existing vocational programs fail to take into account the interests of youth because where they are available they are withheld until late in high school, or until after high school. Unless a student feels that school is worthwhile and the education he receives is tied to after school goals, he often drops school altogether. The recent survey of the educational level of boys in the army shows that if vocational education is deferred to the last year of high school and beyond, about 60 percent of the young men fail to get the kind of education which will fit them best for vocational adjustment.

The second serious problem created is that of unemployment. The Department of Health Education and Welfare recently stated that the unemployment problem in America today is caused by the fact that 90 percent of the unemployed have not had a high school education. They go on to say that there are over 5 million skilled jobs available in industry today but because of an over supply of unskilled workers and the lack of skilled workmen, these jobs remain vacant. For example, the Department of HEW reported that every graduate engineer needs five well-trained technicians behind him. The five do not exist because of inadequate vocational education. Today we have 74 million people in our labor force. By 1970 this number will have grown to 87 million. This is an increase of 20 percent and the greatest in any ten year period in our national history.

If we are able to train this labor force through improved vocational instruction, the United States will be stronger and more prosperous. If we don't, the unemployment situation will grow increasingly worse.

The third problem created is that of crime. Eighty-three percent of the heads of correctional institutions, reformatories, and penitentiaries in the United States said that they felt one important cause of delinquency and criminality among young people is the fact that they never learned how to work so as to be able to make money legitimately sufficiently to meet their real or fancied wants.

Warden Lawes of Sing Sing Prison once said, "The scope of the school must be widened to teach every pupil a vocation...commensurate with his individual and innate abilities...I find that less that 5 percent of the prisoners in Sing Sing have had vocational or trade training." As Bertrand Russell in his book Education and the Good Life concludes: "Give a man the right kind of skill, and he will be virtuous; give him the wrong kind, or none at all, and he will be wicked."

And thus it is seen that our educational system turns millions of high school students loose without any real effort to find their occupational bent or to provide directional sign posts. This group of dropouts must plunge around, trying to locate themselves in the economic world. They often join the ranks of the unemployed and end up with criminal tendencies.

It is very easy to assert that vocational education is the answer to these problems, but somewhat more difficult to prove because of the limited scope of existing programs. Let us take a brief look at a comparison of students with and without vocational education. It has been established that for those students not offered adequate vocational programs the dropout rate was three times as high, the crime rate 10 times as high, and the unemployment rate was eight times as high. The evidence seems to point in the direction of stronger vocational instruction.

Two questions immediately come to mind: "How can we assure equal opportunity to each person for training in the field of his choice?" and "How can we best tailor vocational programs to the needs of individual communities?"

The high school that serves all the youth and provides for all their educational needs is commonly called the comprehensive high school. Says Franklin Keller in Principles of Vocational Education: "The comprehensive high school is an effective institution. Its offerings should embrace both general and vocational education. This is the ideal situation."

I suggest that several steps must be taken if the quality of our vocational instruction is to be improved making the comprehensive high school a reality. This, of course, will require increased funds. As Dr. Conant stated in his book The American High School Today: "Lack of funds is the principle deterrent to the expansion of vocational services to our divergent youth." Because over forty years of state and local financing has failed to sufficiently raise the programs quality, we must overhaul and modernize our vocational education system by granting increased federal funds to the state offices of education on an equalization basis. Grants should be used to promote the following educational goals.

1. To provide greatly expanded vocational training programs for youth who are not interested strictly in academic education.
2. To prepare youth for a suitable occupation commensurate with with the individual's interests, aptitudes, and abilities.
3. To help meet the demands for a suitable trained and well qualified labor force through grounding in not only technical skills, but also as broad an education in the liberal arts as possible.

Because of the fact that the situation varies from community to community, what would be a good vocational high school program in one city would be absurd in another. For this reason, money should not be earmarked for training in restricted ones as in the past, but for the development of broad programs training students in needed and marketable skills.

Those programs especially desirable would be:

1. Area vocational programs which would serve several small school districts. Throughout the United States, there is a growing conviction that the interests and training needs of the greatest number of persons can be met through a rapid development of more area vocational schools which serve two or more school districts. The NEA Journal of February 1961 stated: "The rapid development of more area vocational schools is necessary because small high schools are simply unable to meet the specialized needs of youth."

2. We need more shops and programs for the exploration of interests in the 7th, 8th and 9th grades.

3. A complete system of guidance and counseling which according to the Department of HEW is lacking in thousands of American schools. Former Secretary Ribicoff said last year: "The fact that so many youngsters drop out of school is blamed by experts on insufficient guidance programs. We need a coordinated vocational guidance program." By doing this, the youngsters who are having major trouble in school will be spotted earlier and given special treatment.

4. More funds for distributive education would give students the opportunity to work and make money for a portion of the day and help keep them in school.

I think that it is logical to conclude that since vocation is a part of living, vocational education with its goal of assisting the individual in making their maximum contribution to society through the world of work is a necessity. I maintain that every boy or girl should be a young man or woman going somewhere. They should be free youth in the grip of rich and fruitful education.

SOME MONTANA POPULATION FACTS AND MYTHS

by

Carl F. Kraenzel*

There has been recognition by informed Montanans that the State's economic growth is lagging behind that of most other states and the Nation. The evidence used to support that position is the lag in Montana's income growth and the persistent unemployment that has plagued the State.

Population information, too, can be used to measure lag in economic growth because people will not long remain in a depressed area in these days of information flow. There is much myth mixed in with the facts of Montana population growth. The purpose of this paper is to separate some of the myth from some of the fact in the Montana population growth situation.

Montana Population Data

Table 1 gives information on the growth trends of the State's population. For the total, the increase in 40 years between 1920 and 1960, was only 125,878 or 22.9 percent. This is barely one-half of 1 percent per year. The urban population increased from 172,011 in 1920 to 338,457 in 1960. This is an increase of 96.8 percent, or at the rate of 2.4 percent per year. As a proportion, the change was from 31.3 percent of the total in 1920 to 50.2 percent in 1960.

The rural population during these 40 years decreased by 40,368. As a proportion this decrease was from 68.7 percent of the total in 1920 to 49.8 percent in 1960. The decrease in the 40 year period was 10.8 percent.

For the continental United States the population was 106,021,537 in 1920 and 179,323,175 in 1960. This is an increase of 69.1 percent for the 40 years or an average of 1.7 percent per year. The state that grew most rapidly between 1950 and 1960, namely Florida, had a 40 year increase of 411.3 percent, or an average of 10.3 percent per year. California was the fourth most rapidly growing state between 1950 and 1960, but between 1920 and 1960 it grew 358.7 percent or at an average annual rate of about 8.9 percent. These figures compare with a 1.7 percent average annual growth rate for the Nation as a whole, and with slightly more than 0.5 percent for Montana.

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These then are the basic facts of Montana population change during the period 1920 to 1960, namely:

1. The State's population growth was slow when compared with the national growth, and that of the rapidly increasing states.
2. While there was a growth in both the city and village population at an average annual rate of 1.9 percent, this was offset by the decrease of the farm and ranch population. This decrease was at an average annual rate of 1.2 percent.
3. The farm and ranch population, formerly the seed bed for population growth, decreased strikingly as a proportion of the total, namely from 41.0 percent in 1920 to 15.6 percent in 1960.

Separation of Myth and Fact

This slow population growth for Montana during the past 40 years is indeed very tenuous and is in fact almost mythical when the composition of the population is considered. An earlier study of Montana population growth, using the 1920 population as a base, indicated that the State should have had at least as many as 778,665 persons by 1950, rather than the 591,024 that the census counted.[1] This projected number was calculated by using the 1920 population as a base, but periodically applying the current birth and death rates. Hence the difference, amounting to at least 187,000 people, must be accounted for by an excess of out-migration over in-migration. It is likely that the excess of projected over the census population by 1960 should have been at least about 220,000 population, meaning that Montana should have had about 900,000 population by 1960.[2]

These facts indicate that the 1960 Montana population is far below what it should have been, and contains the seed for a less rapid growth in the future. It is necessary to explore some of the reasons for this. Table 2 gives some of this evidence.

In 1920 Montana had 309,388 persons in the working age group, those 20 to 64 years old. By 1960 after 40 years, this number had increased by only 24,000 to 331,388 people. This is an increase of only 600 per year, and only 7.8 percent in 40 years, or at an average annual rate of less than two-tenths of 1 percent. Obviously, those in this age group moved out of Montana in large numbers.

During this same period, those under 20 years of age increased as did those 65 and over. Together this dependent population increased by 103,878, more than four times the increase of those in the productive (20 to 64) age group. This relationship can be stated as a dependency ratio which is the number of dependents (those under 20 and those 65 and over) per 1000 persons in the working age category (those aged 20 to 64 years). The dependency ratio for all of Montana was 774 in 1920, while in 1960 this had increased to 1036 (see Table 4). In short, Montana had only a small growth in the working age population, but a considerable increase in the dependency ratio between 1920 and 1960. This makes a myth of the presumed meaningful population growth for Montana during the 40 year period.

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[1] See Kraenzel, Carl F. and George Engstom, Montana Population Change, 1920 to 1950, Montana Agricultural Experiment Station, Bulletin No. 520, June, 1956.

[2] This is an estimate resulting from a mere straight line projection of the estimated population beyond 1950 to 1960.

For the Nation as a whole those in the age group 20 to 64 increased by 62.3 percent over the 40 year period, compared with Montana's 7.8 percent increase. The dependency ratio for the Nation as a whole increased from 836 in 1920 to 913 in 1960, while it increased from 774 to 1036 for Montana. This indicates that Montana is still a producer of population in spite of the increase in the dependency ratio for the Nation.

From these data it is necessary to conclude that there is a large element of myth about Montana's population growth in recent decades. The rural farm population has decreased strikingly, namely by 53.4 percent, and has had a considerable increase in the dependency ratio. Since the rural farm population is now only 15.6 percent of the total population, while in 1941 it was 41.0 percent of the total, the seed bed for population growth in Montana is, therefore, significantly smaller in numbers and as a proportion of the whole. There is every reason to expect that the village, town, and city population of Montana will show trends like those of the rural farm population as economic opportunity decreases. Farm and ranch population has moved to the villages and also to the cities of Montana during this 40 year period. During the next decades many will be ready to move on to cities outside the state, or push villagers and city people of Montana into the out-of-state migration routes. This has been the evidence of most migration studies.

Table 3 shows that for the total population of the state, the sex ratio was 104 (meaning 104 males per 100 females) in 1960, having dropped from 120 in 1930. It is least for those under 20, namely 102. In 1960 the sex ratio was below 100 for all three age groups for the urban population and had been under 100 for the age group under 20 for the urban since 1930. This would indicate that men move out of the state in larger numbers than do women. As expected, the sex ratio for the rural farm population is high. Women have been leaving the farms and ranches in larger numbers than men in the past, but less so in the last decade than formerly for those 20 years of age and over.

One further fact (Table 4) is that the number of persons in the Montana labor force grew from 213,840 in 1920 to 254,401 in 1960, an increase of 19.0 percent. In 1920, this number constituted 39.0 percent of all the population, while in 1960 this was 37.7 percent, a slight drop. The proportion of women in the labor force was higher in 1960 than in 1940. The important thing, however, is the striking drop in the males employed in agriculture. Unfortunately, the figures do not go back to 1920. In 1940, however, the census reported 57,418 as employed in agriculture, which had dropped to 37,045 by 1960, or by 35.5 percent. This figure undoubtedly was about 75,000 in 1920, since both in 1960 and and in 1940 the males employed in agriculture constituted about one-third of the rural farm population, and one-third of 225,389 is about 75,000. If this is the case, the employed males in agriculture dropped from 75,000 in 1920 to 37,045 in 1960, or by about 50 percent.

Between 1940 and 1960 the males employed in other than agriculture changed from 94,982 to 126,162, an increase of 32.8 percent. The total male employment increased from 152,400 in 1940 to 163,207 in 1960, or by 7.1 percent. The loss in agricultural employment for males is apparently not made up by the gain in non-agricultural employment; and is explained by the exodus of male population of working age. When it is recognized that more women were in the labor force in 1960 than earlier, this exodus of males is greater yet.

All this helps explain the continued exodus of population of the working age from Montana; and explains why the population growth in Montana is, in large part, myth. Those under 20 and those 65 and over have increased significantly while those of productive age, those 20 to 64, have remained stable in number.

Some of the Consequences Associated with Montana's Population Myth

There are some far reaching consequences that will attend this less optimistic outlook of Montana's population future, unless there is statesman-like action on a state level. The details concerning the slowdown in Montana's income growth for agriculture and for industry cannot be given here. It can, however, be pointed out that though the gross income for the average farm and ranch is so high that the state ranks, usually, in the top seven states of the Nation, costs are equally high. Also, for some farmers and ranchers the net income is high, but for others it is low--so low that average farm income left over for family living is usually considerably less than for non-farm people.

But even these facts are of lesser consequence in the face of the high cost of space in Montana.[3] By high cost of space is meant those higher expenditures entailed for family living such as greater expenditures for education, health and all other public and private services for equal quality service; or its reverse, poorer quality service for the same dollar outlay, which results in greater social costs at a later date.

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[3] This aspect of cost of space was developed by the author in several articles, among them Sutland and Yonland Communities in the Plains, Journal of Rural Sociology for December, 1953, and Chapter 15 on Sutland and Yonland Communities in The Great Plains in Transition, University of Oklahoma Press, 1955.

Table 1: Montana Population Trends, 1920 to 1960 by Total and Rural-Urban Residence Categories.

Residence Categories	1960	1950	1940	1930	1920
Total Population	674,767	591,024	559,456	537,606	548,889
Decennial change %	14.2	5.6	4.1	-2.1	--
Urban Population	338,457	258,034	211,535	181,036	172,011
Decennial change %	31.2	22.0	16.9	5.2	--
% of Total	50.2	43.7	37.8	33.7	31.3
Rural Population	336,310	332,990	347,921	356,570	376,878
Decennial change %	1.0	-0.6	-0.2	-0.5	--
% of Total	49.8	56.3	62.2	66.3	68.7
Rural Farm Population	105,011	135,939	175,707	203,963	225,389
Decennial change %	-22.7	-22.6	-13.8	-9.5	--
% of Total	15.6	23.0	31.4	37.9	41.0
Rural Non-farm Population	231,299	197,051	172,214	152,607	151,489
Decennial change %	17.4	14.4	12.5	0.7	--
% of Total	34.3	33.3	30.8	28.4	27.6

Table 2: Montana population age groups 1920 to 1960 by Total, Rural, Urban, and Rural Farm Residence Categories.

Age and Residence Categories	1960	1950	1940	1930	1920
Total Population	674,767	591,024	559,456	537,606	548,889
Under 20--Total	277,959	210,732	193,031	209,986	220,756
Decennial Change %	31.9	9.1	-8.1	-4.9	--
% of Total	41.2	35.7	34.5	39.1	40.2
20-64--Total	331,388	329,428	330,168	300,920	309,388
Decennial Change %	0.6	-0.2	9.7	-7.7	--
% of Total	49.1	55.7	59.0	56.0	56.4
65 and Over	65,420	50,864	36,257	26,700	18,745
Decennial Change %	28.6	40.3	35.8	42.4	--
% of Total	9.7	8.6	6.5	4.9	3.4

Table 3: Sex ratio for the census periods 1930 to 1960 for Montana, and by age groups and certain residence groups.

Residence and Age Categories	1960	1950	1940	1930
Total population	104	110	115	120
Under 20	102	104	104	104
20 to 64	105	112	119	122
65 and over	106	128	137	262
Urban Population	97	101	103	109
Under 20	99	97	99	99
20 to 64	98	103	104	113
65 and over	89	105	108	125
Rural Population	111	117	123	126
Under 20	106	108	106	106
20 to 64	112	120	132	134
65 and over	128	152	161	267
Rural Farm Population	118	129	135	132
Under 20	114	112	110	109
20 to 64	117	136	149	149
65 and over	153	192	188	198

Table 4: Employment Data for Montana, 1920 to 1960

	14 years old and over	Number in labor force	Labor force as % of all population	Labor force as % of 14 and over
1960	458,398	254,401	37.7	55.5
1950	429,741	232,151	39.3	54.0
1940	427,421	224,994	40.2	52.6
1930	388,985	216,173	40.2	55.6
1920	379,422	213,840	39.0	56.4

Table 5: Certain Population, Income and Agricultural Data for Montana, Nebraska and Oklahoma for the 1959 or 1960 Census Years.*

Item	Montana
Total Population (1960)	674,767
Urban Population (1960)	338,457
% Urban	50.2
Rural Population (1960)	336,310
% Rural	49.8
Total Population Change % 1950-60	14.2
Urban Change % 1950-60	31.2
Rural Change % 1950-60	1.0
Rural Farm Population (1960)	105,598
Density of Total Population (1960)	4.6
Number of Farms (1959)	28,959
Average Acreage per Farm (1959)	2,213
Per Capita Total Income (1960)	2,018
Per Capita Farm Income (1960)	1,686
Per Capita Non-farm Income (1960)	1,551
Per Farm Net Income (1959)	6,147
Per Capita Federal & State Income (1960)	455
Non-worker--worker Ratio (1960)	1.65
% of 1960 Population in State of Birth	59.7
Persons 5 years & over--% migrants	23.1
14 years & older--% in labor force	77.5
Cumulative fertility ratio (1960)	2,029
Median years of school completed (1960)	11.6
Farm level of living index (1959)	126
All family income, median (1959)	5,403
Sex Ratio (1960)	103.8
Rural Farm Population as % of Total (1960)	15.6
1940-50 Total Population change %	5.6
1940-60 Total Population change %	20.8
Per Capita farm income as % of total p/c income	83.5
Per Capita non-farm income as % of total p/c income	76.9

*Data taken mostly from 1960 census PC (1) IC, and the census of Agriculture.

VT 000 614
Hopfengardner, Jerrold D.
Ohio Public Technical Education Notebook, 1967-68.

Ohio State Dept. of Education, Columbus. Div. of Guidance and Testing
MF AVAILABLE IN VT-ERIC SET.
Ohio Trade and Industrial Education Service, Instructional Materials Laboratory, The Ohio State University,
1885 Neil Avenue, Columbus, Ohio 43210 ($2.80).
Pub Date - Sep67 61p.

*TECHNICAL EDUCATION; EDUCATIONAL GUIDANCE; *DIRECTORIES; TECHNICAL INSTITUTES; UNIVERSITIES; COMMUNITY COLLEGES; *PROGRAM DESCRIPTIONS
OHIO

This manual is for counselor use as a source of information about public technical education programs in Ohio. Information from 20 schools is compiled in a standard format which includes (1) address, (2) head administrator, (3) telephone number, (4) school and program characteristics, (5) admissions requirements and procedures, and (6) curriculum offerings. Some of the 62 curriculums offered are (1) Accounting, (2) Aerospace, (3) Agri-Equipment (4) Automotive Service, (5) Business Data Processing, (6) Business Technology, (7) Chemical Research, (8) Child Care, (9) Commerce, (10) Construction and Surveying, (11) Dental Hygiene, (12) Electronics, (13) Engineering Technology, (14) Food Processing, (15) Food Service, (16) Graphic Communications, (17) Horticulture, (18) Industrial Laboratory, (19) Instrumentation and Control Systems, (20) Legal Secretarial, (21) Manufacturing, (22) Mechanical Technology, (23) Medical Secretarial, (24) Mid-Management Retailing, (25) Nursery School Assisting, (26) Office Administration, (27) Retail Management, (28) Sales Marketing, (29) Secretarial Science, and (30) Transportation. (EM)

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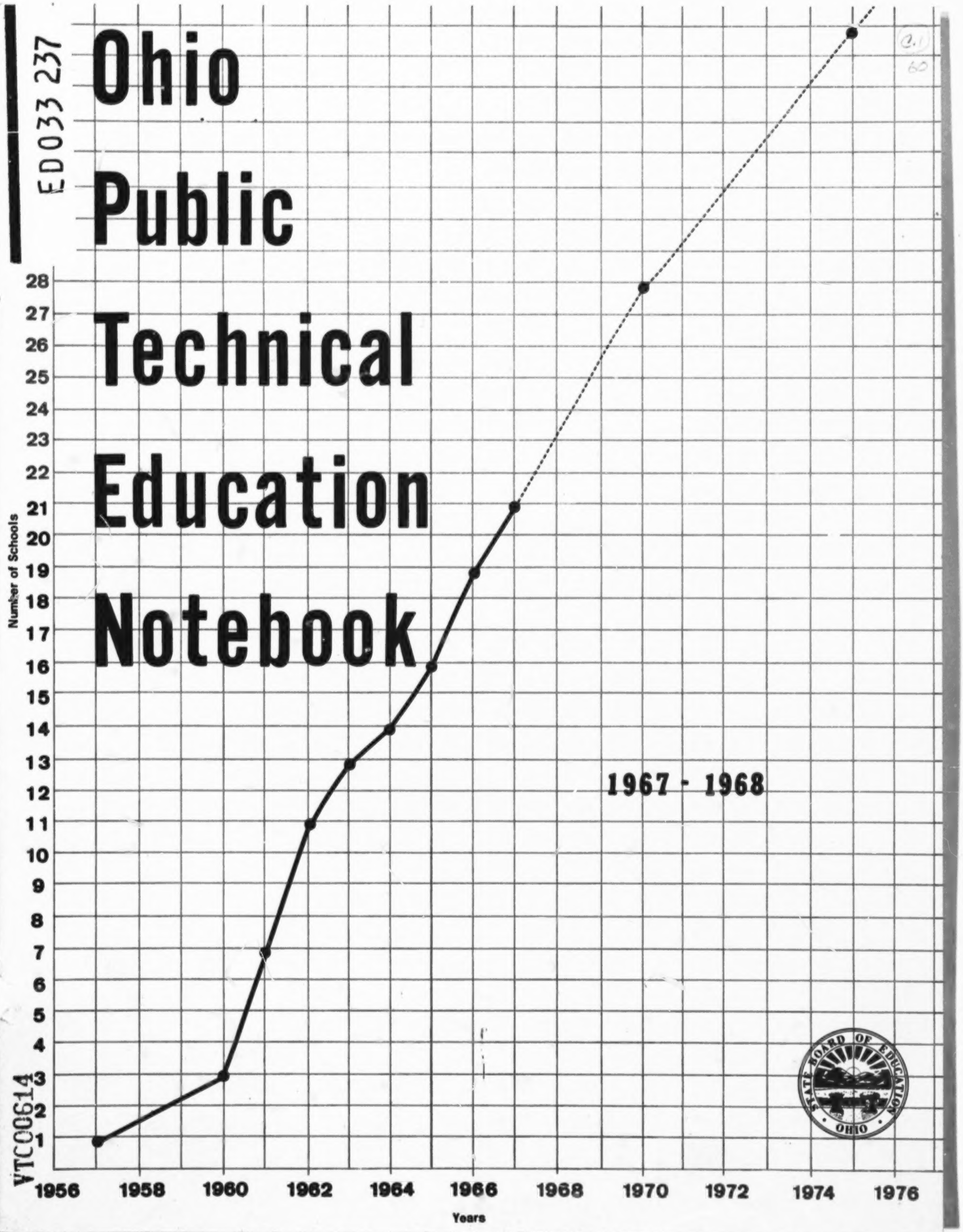
Ohio Public Technical Education Notebook

1967 - 1968



State Board of Education
Ohio

VTC00614

Institute and Programs at a Glance

Programs* institutes	Page No.	Accounting	Building Const.	Chemical	Civil	Credit Management	Data Processing	Dental Hygiene	Electrical	Electronics	Engineering	Executive Secy.	Food Service	Industrial	Legal Secy.	Library	Mechanical	Medical	Medical Secy.	Mortuary Science	Nursing	Retailing	Science	Secretarial	Transportation
The University of Akron	1			X	X					X				X			X					X		X	X
Canton Area Technical School	3			X					X					X			X								
Cinn. Coop. School of Tech.	5						X																		
Univ. of Cinn.-Univ. College	7	X				X	X					X		X	X				X	X		X	X		
Univ. of Cinn.-Walters Br.	9	X				X		X				X		X	X				X	X	X	X	X		
Clark County Tech. Inst.	11	X					X		X			X					X								
Cleveland Technician School	13			X						X							X					X			
Columbus Technical Institute	15			X			X			X			X				X					X			
Cuyahoga Community College	17	X	X				X	X	X	X			X			X	X	X			X	X		X	X
Dayton Technical Center	19													X								X			
Kent State Univ.-Ashtabula	21																				X				
Kent State Univ.-Salem	23				X				X					X			X								
Lakeland Community College	25	X		X			X		X					X			X					X		X	
Lorain City Comm. College	27	X		X	X		X		X					X			X	X			X	X		X	
Mansfield School of Tech.	29								X								X					X			
Miami Univ.-Middletown	31			X					X	X				X			X							X	
Miami Valley Inst. of Tech.	33								X								X								
Northeast Technical Institute	35									X							X								
Penta County Tech. Inst.	37			X	X		X		X		X	X	X				X						X		
The University of Toledo	39		X		X		X			X	X		X	X	X	X		X				X		X	

*This does not represent an all-inclusive listing of programs offered by the institutions.

OHIO
PUBLIC TECHNICAL EDUCATION NOTEBOOK

1967 Edition

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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M. W. ESSEX
STATE SUPERINTENDENT OF PUBLIC INSTRUCTION
STATE OF OHIO DEPARTMENT OF EDUCATION

Prepared by

Jerrold D. Hopfengardner

Published by

Division of Guidance and Testing
751 Northwest Boulevard
Columbus, Ohio 43212

September, 1967

FOREWORD

Technical education programs have been developed to meet the challenges of change created in the employment pattern in business and industry by the technological revolution. The development and anticipated growth of public technical education in Ohio is graphically depicted on the cover of this publication.

The purpose of this Notebook is to assist school counselors to obtain meaningful information about the public technical education programs throughout Ohio. The counselor is reminded that this publication is not intended for direct use by students but, rather, for counselor use in facilitating student decisions about education beyond high school. This practice should be closely adhered to in order to avoid misuse or misinterpretation of information contained in the Notebook.

Ohio Public Technical Education Programs Notebook (1965-1966) listed twelve institutions recognized by the Ohio Department of Education. This publication has been expanded to incorporate those institutions under the direction of the Ohio Board of Regents as well as the Ohio Department of Education. The general format of the data forms for each institution is based upon the style developed by H. Eugene Wysong for the first publication in this series (1963) and modified by Sam Angus for the second edition (1966). The revised Notebook includes appendices containing resource information for the school counselor and the data format resembles that of the Ohio College Notebook in anticipation of these two publications becoming companion resources.

Appreciation is extended to those members of the Ohio Board of Regents and of the Division of Vocational Education, Ohio Department of Education, who provided invaluable assistance in formulating this publication. The administrators of the technical institutes, as well as numerous school counselors and counselor educators, made significant contributions to the development of this Notebook. Appreciation is expressed to Miss Sharon M. Rector and Mrs. Lois A. Eggleston for the typing and design, respectively.

Jerrold D. Hopfengardner, District Supervisor for Southwestern Ohio, served as editor for this publication.

John G. Odgers

John G. Odgers, Director
Division of Guidance and Testing

JGO:smr
September, 1967

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THE UNIVERSITY OF AKRON

ADDRESS: Akron, Ohio 44304
ADMINISTRATOR: W.M. Petry

TELEPHONE: (216) 762-2441
TITLE: Dean

DESCRIPTIVE INFORMATION

Number Of Fall 1966 Students: Men 818 Women 760 Freshmen 850
Number Of Applicants For Fall 1966 Freshmen Class ______ Number Offered Admission ______

Approved Housing:	Dormitory	Private Rooms	YMCA/YWCA	Other
Men:				
Women:				

Instructional Staff: Full-Time 30 Part-Time 20
Academic Calendar: Semester X Quarter ______ Trimester ______ Other ______
Summer Job Placement Service? Yes Graduate Placement Service? Yes Co-Op Program? No
Baccalaureate Degree Credits Earned: 64 Credit hours

Suggested Time For Visitations: Open

ADMISSIONS REQUIREMENTS & PROCEDURES

Entrance Requirements: None

Tests Required For Counseling/Placement And Median Score Of Accepted Applicants: SAT; ACT

Personal Interview Required? No School Visitation Required? No
Recommended High School Courses*: 25: Algebra, Plane Geometry

Suggested Date For Filing Application: Anytime Deadline: August 15
Deadline For Filing High School Transcript: August 15
Application Fee: $ 15 Deadline: August 15 Refundable? No
Deadline For Initial Deposit None Balance Due At registration
Date Of Acceptance Notification To Applicant: ______
Deadline For Financial Aid Applications: ______

CURRICULA – 1966–67 Enrollment

Program*	Fresh.	U/Class.	Capacity
14	10		
17	43		
18	29		
19	3		
23	46		
34	24		
43	33		
57	57		
59	133		

Program*	Fresh.	U/Class.	Capacity

Extra Curricular Activities Sponsored By School: Athletics, band, drama, and special clubs

---

* *Refer To Program Key On Inside Back Cover.*

FINANCIAL INFORMATION

1967–68 Fees: Tuition For Residents of District/State: $ #   Non-Resident: $ #
Tuition Plan Available? No   Arrangement: ____
Sources of Financial Aid: Scholarships and loans
Range Of Stipends: $20-$500   Average Stipend: $250
Co-Op Programs: No

STUDENT PROFILE DATA

High School Rank of 1966 Freshman Class: Top Tenth ____; Top Quarter ____; Top Third ____; Top Half ____; Top Two-Thirds ____;
Typical Employment Obtained By 1966 Graduates*: 23,43: industrial; 59: industrial and professional

Number Of 1966 Graduates' Starting Salaries: Below $300 ____; $300-$399 ____; $400-$499 ____; $500-599 ____; $600 And Above ____

REMARKS

1967-68 Tuition For Residents Of State: $13 per cr. hr., plus $20 gen. serv. fee
1967-68 Tuition For Non-Residents Of State: $30 per cr. hr., plus $20 gen. serv. fee

COUNSELOR'S NOTES:

Students Interested In This School	Notes

***Refer To Program Key On Inside Back Cover.**

CANTON AREA TECHNICAL SCHOOL

ADDRESS: 521 Tuscarawas St., West
Canton, Ohio 44700

ADMINISTRATOR: Fred A. Yenny

TELEPHONE: (216) 452-0350

TITLE: Supervisor

DESCRIPTIVE INFORMATION

Number Of Fall 1966 Students: Men 72 Women 0 Freshmen 44
Number Of Applicants For Fall 1966 Freshmen Class 95 Number Offered Admission 69

Approved Housing:	Dormitory	Private Rooms	YMCA/YWCA	Other
Men:			X	
Women:				

Instructional Staff: Full-Time 3 Part-Time 16
Academic Calendar: Semester ____ Quarter X Trimester ____ Other ____
Summer Job Placement Service? Yes Graduate Placement Service? Yes Co-Op Program? No
Baccalaureate Degree Credits Earned: Course work is college level, but baccalureate credit is granted at the discretion of the particular college involved.
Suggested Time For Visitations: Call or write for appointment.

ADMISSIONS REQUIREMENTS & PROCEDURES

Entrance Requirements: High school graduate; 2 years math; 1 year science
Tests Required For Counseling/Placement And Median Score Of Accepted Applicants: EPSAT (68); ACE (108)
Personal Interview Required? In special cases School Visitation Required? No
Recommended High School Courses*: 25: Algebra, Plane Geometry, Physical Science
Suggested Date For Filing Application: Fall of senior year Deadline:
Deadline For Filing High School Transcript:
Application Fee: $15 Deadline: Refundable? No
Deadline For Initial Deposit May 1 or 2 weeks after acceptance letter Balance Due Aug. 21 - Sept. 1
Date Of Acceptance Notification To Applicant: Within 3 weeks of exam & transcript receipt
Deadline For Financial Aid Applications:

CURRICULA – 1966–67 Enrollment

Program*	Fresh.	U/Class.	Capacity
14 (New)	0	0	48
22	22	15	48
34	0	0	48
43	22	13	48

Program*	Fresh.	U/Class.	Capacity

Extra Curricular Activities Sponsored By School: ASQC (Amer. Society for Quality Control) Student Chapter, basketball, and bowling

---

** Refer To Program Key On Inside Back Cover.*

FINANCIAL INFORMATION

1967–68 Fees: Tuition For Residents of District/State: $ 95 Non-Resident: $105
Tuition Plan Available? Yes Arrangement:
Sources of Financial Aid: Timken Vocational High School Alumni Scholarship
Range Of Stipends: Average Stipend:
Co-Op Programs: None

STUDENT PROFILE DATA

High School Rank of 1966 Freshman Class: Top Tenth 0%; Top Quarter 15%; Top Third 19%; Top Half 15%; Top Two-Thirds 7%;
Typical Employment Obtained By 1966 Graduates*: 43: bearing mfg., hydraulic press mfg., boiler mfg. & research, metallurgical research, industrial sales; 22: computer mfg. & maint. electric utility, industrial sales, television banking systems & design.
Number Of 1966 Graduates' Starting Salaries: Below $300 0; $300-$399 1; $400-$499 14; $500-599 2; $600 And Above 0

REMARKS

COUNSELOR'S NOTES:

Students Interested In This School	Notes

Refer To Program Key On Inside Back Cover.

CINCINNATI COOPERATIVE SCHOOL OF TECHNOLOGY

ADDRESS: 3520 Central Parkway
Cincinnati, Ohio 45223

ADMINISTRATOR: Clifford R. House

TELEPHONE: (513) 681-6150, Ext. 75

TITLE: Dean of Instruction

DESCRIPTIVE INFORMATION

Number Of Fall 1966 Students: Men 103 Women 16 Freshmen 119

Number Of Applicants For Fall 1966 Freshmen Class 150 Number Offered Admission 121

Approved Housing:

	Dormitory	*Private Rooms*	*YMCA/YWCA*	*Other*
Men:			X	Fenwick Club
Women:			X	L. B. Harris Club

Instructional Staff: Full–Time 7 Part–Time 2

Academic Calendar: Semester ____ Quarter ____ Trimester ____ Other 5 ten week terms per year

Summer Job Placement Service? Yes Graduate Placement Service? Yes Co–Op Program? Yes

Baccalaureate Degree Credits Earned: Course work is on college level. Any transferring of credit is at the discretion of a particular college. Prime objective is terminal education.

Suggested Time For Visitations: Open

ADMISSIONS REQUIREMENTS & PROCEDURES

Entrance Requirements: High school graduate; preferably in upper 2/3 of class; able to pass entrance exam.

Tests Required For Counseling/Placement And Median Score Of Accepted Applicants: DAT

Personal Interview Required? Yes School Visitation Required? No

Recommended High School Courses*: 42: Algebra, Geometry; 57: H.S. Distributive Educ.; 31: none; 9: 2 yr. Math, Accounting

Suggested Date For Filing Application: Early January Deadline: August 15

Deadline For Filing High School Transcript: August 15

Application Fee: $10 Deadline: Before entrance exam Refundable? No

Deadline For Initial Deposit June Balance Due September

Date Of Acceptance Notification To Applicant: 5 weeks after entrance exam

Deadline For Financial Aid Applications:

CURRICULA – 1966–67 Enrollment

Program*	Fresh.	U/Class.	Capacity
9	41	0	50
42	33	0	50
52	21	0	50
57	24	0	50

Program*	Fresh.	U/Class.	Capacity

Extra Curricular Activities Sponsored By School: None

**** Refer To Program Key On Inside Back Cover.***

FINANCIAL INFORMATION

1967–68 Fees: Tuition For Residents of District/State: $ 100 Non-Resident: $ 125
Tuition Plan Available? Yes Arrangement: Cooperative programs
Sources of Financial Aid: Cooperative working - training jobs
Range Of Stipends: # Average Stipend: $560
Co-Op Programs: Alternating ten weeks work and study terms, 12 months per year.

STUDENT PROFILE DATA

High School Rank of 1966 Freshman Class: Top Tenth ____; Top Quarter ____; Top Third ____; Top Half ____; Top Two-Thirds ____;
Typical Employment Obtained By 1966 Graduates*: ____

Number Of 1966 Graduates' Starting Salaries: Below $300 ____; $300-$399 ____; $400-$499 ____; $500-599 ____; $600 And Above ____

REMARKS

Range Of Stipends: $560 - $700 per term

COUNSELOR'S NOTES:

Students Interested In This School	Notes

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*Refer To Program Key On Inside Back Cover.

UNIVERSITY OF CINCINNATI – UNIVERSITY COLLEGE

ADDRESS: Cincinnati, Ohio 45221 ADMINISTRATOR: Hilmar C. Krueger

TELEPHONE: (513) 475-2742 TITLE: Dean

DESCRIPTIVE INFORMATION

Number Of Fall 1966 Students: Men 1184 Women 649 Freshmen 1094
Number Of Applicants For Fall 1966 Freshmen Class 1755 Number Offered Admission ____

Approved Housing:	*Dormitory*	*Private Rooms*	*YMCA/YWCA*	*Other*
Men:	X	if necessary		
Women:	X			

Instructional Staff: Full–Time 65 Part–Time 2
Academic Calendar: Semester ____ Quarter X Trimester ____ Other ____
Summer Job Placement Service? Yes Graduate Placement Service? Yes Co–Op Program? No
Baccalaureate Degree Credits Earned: all courses except non-credit "Introductory Algebra"

Suggested Time For Visitations: 9:00 - 4:00

ADMISSIONS REQUIREMENTS & PROCEDURES

Entrance Requirements: # ("REMARKS")

Tests Required For Counseling/Placement And Median Score Of Accepted Applicants: SAT and/or ACT

Personal Interview Required? No School Visitation Required? No
Recommended High School Courses*: 9: 2 units Math "C" or better; 2,17,36,53: 2 units Math; 58: 2 units Math with "C" or better in Chemistry or Physics; 15, 26, 32, 38, 39, 45: 1 unit Math
Suggested Date For Filing Application: Early in senior year Deadline: August 15
Deadline For Filing High School Transcript: Early as possible after 6th semester
Application Fee: $15 Deadline: With application Refundable? No
Deadline For Initial Deposit 30 days after acceptance Balance Due Registration day
Date Of Acceptance Notification To Applicant: Approx. 2 weeks after application is filed
Deadline For Financial Aid Applications: March 1

CURRICULA – 1966–67 Enrollment

Program*	Fresh.	U/Class.	Capacity
2	18	-	
9	34	15	
15	74	54	
17	42	38	
26	67	30	
32	29	14	
36	159	89	
38	53	35	
39	28	15	
45	42	29	
48	7	-	

Program*	Fresh.	U/Class.	Capacity
53	95	68	
58	47	31	

Extra Curricular Activities Sponsored By School: Those offered by any large university

---

* ***Refer To Program Key On Inside Back Cover.***

FINANCIAL INFORMATION

1967–68 Fees: Tuition For Residents of Cincinnati XXXXX/State: $525/915 Non-Resident: $ 1050
Tuition Plan Available? Yes Arrangement: Generally through local banks
Sources of Financial Aid: Student Financial Aid Office (scholarships and loans)
Range Of Stipends: up to room Average Stipend: Tuition
Co-Op Programs: ______

STUDENT PROFILE DATA

High School Rank of 1966 Freshman Class: Top Tenth ______; Top Quarter ______; Top Third 10%; Top Half ______; Top Two-Thirds 48%;
Typical Employment Obtained By 1966 Graduates*: ______

Number Of 1966 Graduates' Starting Salaries: Below $300 ______; $300-$399 ______; $400-$499 ______; $500-599 ______; $600 And Above ______

REMARKS

Entrance Requirements: Out-of-state men: upper 2/3 of class; Out-of-state women: upper 1/3 of class; High school graduate with 12 college preparatory units to include: English 3, Math 2, Science 1, Social Studies 1.

COUNSELOR'S NOTES:

Students Interested In This School	Notes

Refer To Program Key On Inside Back Cover.

UNIVERSITY OF CINCINNATI – RAYMOND WALTERS BRANCH

ADDRESS: 9555 Plainfield Road
Cincinnati, Ohio 45236

ADMINISTRATOR: Hilmar C. Krueger

TELEPHONE: (513) 793-6010

TITLE: Dean

DESCRIPTIVE INFORMATION

Number Of Fall 1966 Students: Men ______ Women ______ Freshmen ______
Number Of Applicants For Fall 1966 Freshmen Class ______ Number Offered Admission ______

Approved Housing:	*Dormitory*	*Private Rooms*	*YMCA/YWCA*	*Other*
Men:				
Women:				

Instructional Staff: Full–Time 30 Part–Time 2
Academic Calendar: Semester ______ Quarter X Trimester ______ Other ______
Summer Job Placement Service? Yes Graduate Placement Service? Yes Co–Op Program? No
Baccalaureate Degree Credits Earned: all courses except non-credit "Introductory Algebra"

Suggested Time For Visitations: 9:00 - 4:00

ADMISSIONS REQUIREMENTS & PROCEDURES

Entrance Requirements: High school graduate with 10 preparatory units including: English 3, Math 1-2, Science 1, Social Studies 1.
Tests Required For Counseling/Placement And Median Score Of Accepted Applicants: SAT or ACT Special exams for nursing and dental hygiene
Personal Interview Required? No School Visitation Required? ______
Recommended High School Courses*: 2,17,36,53: 2 units Math; 58: at least "C" 2 units Math, 1 unit Chemistry or Physics; 26,39,45: 1 unit Math; 21, 48, 50: 2 units Math, 1 unit Chemistry

Suggested Date For Filing Application: Early in senior year Deadline: August 15
Deadline For Filing High School Transcript: Early as possible after 6th semester
Application Fee: $ 15 Deadline: With application Refundable? No
Deadline For Initial Deposit 30 days after acceptance Balance Due Registration day
Date Of Acceptance Notification To Applicant: Approx. 2 weeks after receipt of application transcript
Deadline For Financial Aid Applications: March 1

CURRICULA – 1966–67 Enrollment

Program*	Fresh.	U/Class.	Capacity

Program*	Fresh.	U/Class.	Capacity

Extra Curricular Activities Sponsored By School: Not yet initiated

---

***** Refer To Program Key On Inside Back Cover.*

FINANCIAL INFORMATION

1967–68 Fees: Tuition For Residents of District/State: $ 540 Non-Resident: $ 1050
Tuition Plan Available? Yes Arrangement: Local banks
Sources of Financial Aid: Student Financial Aid Office
Range Of Stipends: ______ Average Stipend: ______
Co-Op Programs: ______

STUDENT PROFILE DATA

High School Rank of 1966 Freshman Class: Top Tenth ______; Top Quarter ______; Top Third ______;
Top Half ______; Top Two-Thirds ______;
Typical Employment Obtained By 1966 Graduates*: ______

Number Of 1966 Graduates' Starting Salaries: Below $300 ______; $300-$399 ______; $400-$499 ______;
$500-599 ______; $600 And Above ______

REMARKS

This branch opened September, 1967.

COUNSELOR'S NOTES:

Students Interested In This School	Notes

***Refer To Program Key On Inside Back Cover.**

CLARK COUNTY TECHNICAL INSTITUTE

ADDRESS: 1901 Selma Road
Springfield, Ohio 45502

ADMINISTRATOR: Richard O. Brinkman

TELEPHONE: (513) 325-8512

TITLE: Director-Secretary

DESCRIPTIVE INFORMATION

Number Of Fall 1966 Students: Men 194 Women 22 Freshmen 138

Number Of Applicants For Fall 1966 Freshmen Class 235 Number Offered Admission 152

Approved Housing:	*Dormitory*	*Private Rooms*	*YMCA/YWCA*	*Other*
Men:		X	X	
Women:		X	X	

Instructional Staff: Full-Time 11 Part-Time 19

Academic Calendar: Semester ___ Quarter X Trimester ___ Other ___

Summer Job Placement Service? Yes Graduate Placement Service? Yes Co-Op Program? Yes

Baccalaureate Degree Credits Earned: Some in all programs

Suggested Time For Visitations: 8:00 - 5:00 Monday - Friday

ADMISSIONS REQUIREMENTS & PROCEDURES

Entrance Requirements: High school graduate

Tests Required For Counseling/Placement And Median Score Of Accepted Applicants: EPSAT, RPAT, GCT

Personal Interview Required? Yes School Visitation Required? Yes

Recommended High School Courses*: 9: Algebra; 16,22,43: Algebra & Geometry; 50: Algebra, Biology & Chemistry

Suggested Date For Filing Application: January year of entry Deadline: Until classes are filled

Deadline For Filing High School Transcript: Before activation of application

Application Fee: $ 10 Deadline: With application Refundable? No

Deadline For Initial Deposit N/A Balance Due

Date Of Acceptance Notification To Applicant: March 15

Deadline For Financial Aid Applications: August 1

CURRICULA – 1966-67 Enrollment

Program*	Fresh.	U/Class.	Capacity
1	12	0	25
4	24	25	50
5	27	12	50
9	29	19	50
22	17	8	50
26	12	0	25
43	17	14	50

Program*	Fresh.	U/Class.	Capacity

Extra Curricular Activities Sponsored By School: In addition to Institute-sponsored activities, students also have a limited membership in the YMCA or YWCA.

*** Refer To Program Key On Inside Back Cover.**

FINANCIAL INFORMATION

1967–68 Fees: Tuition For Residents of District/State: $300/350 per year Non-Resident: $ 350/600 per year

Tuition Plan Available? No Arrangement:

Sources of Financial Aid: Individual scholarships; CCTI Foundation; Government & approved loans

Range Of Stipends: Tuition Average Stipend:

Co-Op Programs:

STUDENT PROFILE DATA

High School Rank of 1966 Freshman Class: Top Tenth 5%; Top Quarter 17%; Top Third 24%; Top Half 57%; Top Two-Thirds 73%; Top Three-Fourths

Typical Employment Obtained By 1966 Graduates*: 4: grain, seed, fertilizer companies, banks; 5: farm implement companies; 9: banks, mfg. firms, Civil Service, data processing firms; 22: firms mfg. electronic or electrical components or equip., communication industry(Remarks)

Number Of 1966 Graduates' Starting Salaries: Below $300 0; $300-$399 8; $400-$499 20; $500-599 11; $600 And Above 1

REMARKS

Typical Employment (Con't)

research labs; 43: tool & die design, metal fabrication, jet engine testing

COUNSELOR'S NOTES:

Students Interested In This School	Notes

Refer To Program Key On Inside Back Cover.

CLEVELAND TECHNICIAN SCHOOL

ADDRESS: 4600 Detroit Avenue
Cleveland, Ohio 44102

ADMINISTRATOR: H.B. Armstrong

TELEPHONE: (216) 631-1528

TITLE: Coord. of Technician Training

DESCRIPTIVE INFORMATION

Number Of Fall 1966 Students: Men 140 Women 1 Freshmen 75
Number Of Applicants For Fall 1966 Freshmen Class 86 Number Offered Admission 75

Approved Housing:

	Dormitory	Private Rooms	YMCA/YWCA	Other
Men:				
Women:				

Instructional Staff: Full-Time 3 Part-Time 14
Academic Calendar: Semester X Quarter ___ Trimester ___ Other ___
Summer Job Placement Service? ___ Graduate Placement Service? Yes Co-Op Program? Retail merchandising only
Baccalaureate Degree Credits Earned: Refer to catalog

Suggested Time For Visitations: By appointment

ADMISSIONS REQUIREMENTS & PROCEDURES

Entrance Requirements: High school graduate; good background in math and science

Tests Required For Counseling/Placement And Median Score Of Accepted Applicants: SRA; MAT; Otis IQ

Personal Interview Required? No School Visitation Required? No
Recommended High School Courses*: all Engineering Tech.: Algebra, Geometry, Physics, or Chemistry

Suggested Date For Filing Application: Early spring Deadline: When sections are filled
Deadline For Filing High School Transcript: Ten days after filing application
Application Fee: $ 12 Deadline: With application Refundable? No
Deadline For Initial Deposit Ten days after acceptance Balance Due Five days after tests
Date Of Acceptance Notification To Applicant:
Deadline For Financial Aid Applications:

CURRICULA – 1966–67 Enrollment

Program*	Fresh.	U/Class.	Capacity
14	40	40	80
23	40	40	80
33	40	40	80
43	40	40	80
54	New Sept. '67		

Program*	Fresh.	U/Class.	Capacity

Extra Curricular Activities Sponsored By School: UNITEC Student Organization

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** Refer To Program Key On Inside Back Cover.*

FINANCIAL INFORMATION

1967–68 Fees: Tuition For Residents of District/State: $ 145/sem. Non-Resident: $ Same
Tuition Plan Available? Yes Arrangement:
Sources of Financial Aid:
Range Of Stipends: Average Stipend:
Co-Op Programs: Retail merchandising only

STUDENT PROFILE DATA

High School Rank of 1966 Freshman Class: Top Tenth ; Top Quarter ; Top Third ;
Top Half ; Top Two-Thirds ; Top Three-Fourths
Typical Employment Obtained By 1966 Graduates*: 43: mechanical mfg. industries; 23: industrial electronic industries

Number Of 1966 Graduates' Starting Salaries: Below $300 ; $300-$399 ; $400-$499 ;
$500-599 ; $600 And Above

REMARKS

COUNSELOR'S NOTES:

Students Interested In This School	Notes

**Refer To Program Key On Inside Back Cover.*

COLUMBUS TECHNICAL INSTITUTE

ADDRESS: 557 Mt. Vernon Avenue
Columbus, Ohio 43215

ADMINISTRATOR: Clinton E. Tatsch

TELEPHONE: (614) 221-6743

TITLE: Executive Director

DESCRIPTIVE INFORMATION

Number Of Fall 1966 Students: Men 386 Women 43 Freshmen 309

Number Of Applicants For Fall 1966 Freshmen Class 353 Number Offered Admission 353

Approved Housing:	*Dormitory*	*Private Rooms*	*YMCA/YWCA*	*Other*
Men:			X	
Women:		X	X	X

Instructional Staff: Full–Time 30 Part–Time 6

Academic Calendar: Semester ___ Quarter X Trimester ___ Other ___

Summer Job Placement Service? Yes Graduate Placement Service? Yes Co–Op Program? Yes

Baccalaureate Degree Credits Earned:

Suggested Time For Visitations: 9:00 - 3:00 Monday - Friday

ADMISSIONS REQUIREMENTS & PROCEDURES

Entrance Requirements: High school graduate; algebra and other courses for certain technologies.

Tests Required For Counseling/Placement And Median Score Of Accepted Applicants: ACT (E-16.7; M-18.8; SS-18.8; NS-20.1; COMP-18.5); Aptitude Test for Programmer Personnel

Personal Interview Required? for coop School Visitation Required? No

Recommended High School Courses*: 3,28: Algebra; 6: Algebra, Mech. Drawing; 9: Algebra, Plane Geometry; 13: Algebra, Chemistry; 23: Algebra, Physics; 43: Algebra, Mech. Drawing, Physics; 46: Algebra, Chemistry

Suggested Date For Filing Application: During senior year Deadline: September

Deadline For Filing High School Transcript: Same as application

Application Fee: $ 10 Deadline: with application Refundable? No

Deadline For Initial Deposit Day before classes begin Balance Due Same

Date Of Acceptance Notification To Applicant: Ten days following receipt of all information

Deadline For Financial Aid Applications:

CURRICULA – 1966–67 Enrollment

Program*	Fresh.	U/Class.	Capacity
3	22		
6	33		
9	62		
13	8		
23	39		
28	14		
29	19		
43	29		
46	5		
55	44		
62	34		

Program*	Fresh.	U/Class.	Capacity

Extra Curricular Activities Sponsored By School: Distributive Education Clubs of America, Student Senate, intramural athletics

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* *Refer To Program Key On Inside Back Cover.*

FINANCIAL INFORMATION

1967–68 Fees: Tuition For Residents of District/State: $100/quar. Non-Resident: $ 110 Out-Of-State: $220
Tuition Plan Available? No Arrangement:
Sources of Financial Aid:
Range Of Stipends: Tuition Average Stipend: $100 quarter
Co-Op Programs: Retail, wholesale

STUDENT PROFILE DATA

High School Rank of 1966 Freshman Class: Top Tenth 2%; Top Quarter 10%; Top Third 16%;
Top Half 38%; Top Two-Thirds 56%;
Typical Employment Obtained By 1966 Graduates*: 9: banks & businesses; 14: labs of mfg. companies; 23: testing, design & labs in research companies; 43: design, drafting for mfg. companies; 46: lab-research & foundries; 62: sales, stock manager, credit for wholesale companies
Number Of 1966 Graduates' Starting Salaries: Below $300 1; $300-$399 2; $400-$499 13;
$500-599 12; $600 And Above 5

REMARKS

Average class size: 18
Prognostic and admissions data available to counselors on request.

Programs being developed: Civil, Instrumentation, Banking, Jr. Accounting, Electro-Mechanical, Police Science, Construction, Consumer Finance, Printing, and Executive Secretary.

COUNSELOR'S NOTES:

Students Interested In This School	Notes

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*Refer To Program Key On Inside Back Cover.

CUYAHOGA COMMUNITY COLLEGE

ADDRESS: 2214 East 14th Street
Cleveland, Ohio 44115

ADMINISTRATOR: Dr. Fred C. Sutton

TELEPHONE: (216) 241-1556

TITLE: Dean, Technical-Occupational Programs

DESCRIPTIVE INFORMATION

Number Of Fall 1966 Students: Men 2673 Women 1730 Freshmen 3546
Number Of Applicants For Fall 1966 Freshmen Class 3546 Number Offered Admission 3546

	Dormitory	Private Rooms	YMCA/YWCA	Other
Approved Housing:				
Men:			X	
Women:			X	

Instructional Staff: Full-Time 53 Part-Time 118
Academic Calendar: Semester X Quarter ___ Trimester ___ Other ___
Summer Job Placement Service? Yes Graduate Placement Service? Yes Co-Op Program? Yes - some programs
Baccalaureate Degree Credits Earned: Course work is on college level and can be used for earning Associate in Science Degree. Programs are basically for employment, however.
Suggested Time For Visitations: Open

ADMISSIONS REQUIREMENTS & PROCEDURES

Entrance Requirements: High school graduate or equivalent
Tests Required For Counseling/Placement And Median Score Of Accepted Applicants: ACT
Personal Interview Required? No School Visitation Required? No
Recommended High School Courses*: None

Suggested Date For Filing Application: Before August 25 Deadline: September 1
Deadline For Filing High School Transcript: September 1
Application Fee: $ None Deadline: ___ Refundable? ___
Deadline For Initial Deposit When tuition is paid Balance Due ___
Date Of Acceptance Notification To Applicant: As soon as application is complete
Deadline For Financial Aid Applications: July 1

CURRICULA – 1966–67 Enrollment

Program*	Fresh.	U/Class.	Capacity
1	311	104	800
8	109	29	200
9	602	77	1000
10	156	50	400
12	20	-	20
21	25	18	50
22	145	53	300
23	140	24	200
27	61	34	200
29	20	-	50
36	367	46	600

Program*	Fresh.	U/Class.	Capacity
38	94	43	200
40	98	18	200
43	695	60	1000
44	97	25	250
49	110	47	200
50	160	90	300
54	20	13	100
56	26	14	100
59	264	106	500
60	16	-	50
61	10	6	100

Extra Curricular Activities Sponsored By School: A series of clubs sponsored by Student Activity Office

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*** Refer To Program Key On Inside Back Cover.***

FINANCIAL INFORMATION

1967–68 Fees: Tuition For Residents of District/State: $ 300 Non-Resident: $ 450
Tuition Plan Available? No Arrangement: ____
Sources of Financial Aid: NDEA Loans, Educ. Oppor. Grant, and scholarships
Range Of Stipends: $300-700 Average Stipend: $500
Co-Op Programs: Food Service Management

STUDENT PROFILE DATA

High School Rank of 1966 Freshman Class: Top Tenth ____; Top Quarter ____; Top Third ____;
Top Half ____; Top Two-Thirds ____;
Typical Employment Obtained By 1966 Graduates*: 8: construction & architectural firms; 22: telephone & electric companies; 43: steel & rubber firms; 1: accounting firms

Number Of 1966 Graduates' Starting Salaries: Below $300 0; $300-$399 10; $400-$499 30;
$500-599 30; $600 And Above 5

REMARKS

60% of student enrollment is part-time.

Programs being developed: Chemical, Optical, Medical Record, Urban Planning, Mental Health, Instrumentation, Occupational Therapy, Physical Therapy, and General Clerical.

COUNSELOR'S NOTES:

Students Interested In This School	Notes

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*Refer To Program Key On Inside Back Cover.

DAYTON TECHNICAL CENTER

ADDRESS: 118 East 1st Street
Dayton, Ohio 45402

ADMINISTRATOR: Paul C. Snyder

TELEPHONE: (513) 222-6303

TITLE: Director

DESCRIPTIVE INFORMATION

Number Of Fall 1966 Students: Men 34 Women 6 Freshmen 26

Number Of Applicants For Fall 1966 Freshmen Class 70 Number Offered Admission 26

Approved Housing:	*Dormitory*	*Private Rooms*	*YMCA/YWCA*	*Other*
Men:			X	
Women:				

Instructional Staff: Full–Time 1 Part–Time 20

Academic Calendar: Semester ____ Quarter X Trimester ____ Other ____

Summer Job Placement Service? Yes Graduate Placement Service? Yes Co–Op Program? Yes

Baccalaureate Degree Credits Earned: Program is intended to assist graduates to directly enter technical occupations.

Suggested Time For Visitations: Open

ADMISSIONS REQUIREMENTS & PROCEDURES

Entrance Requirements: High school graduate

Tests Required For Counseling/Placement And Median Score Of Accepted Applicants: CTMM; DAT; Prognostic Mechnical Ability (Upper 50%ile)

Personal Interview Required? Yes School Visitation Required? Yes

Recommended High School Courses*: 34: Algebra, General Science, Chemistry; 47: Math, General Business or Distributive Educ.; 7: Math, English

Suggested Date For Filing Application: Senior year Deadline: September 15

Deadline For Filing High School Transcript: Obtained from high school by Center

Application Fee: $ 15 Deadline: ____ Refundable? No

Deadline For Initial Deposit None Balance Due September 15

Date Of Acceptance Notification To Applicant: One week after completion of required tests

Deadline For Financial Aid Applications: ____

CURRICULA – 1966–67 Enrollment

Program*	Fresh.	U/Class.	Capacity
34	8	4	25
47	18	10	40

Program*	Fresh.	U/Class.	Capacity

Extra Curricular Activities Sponsored By School: None

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* *Refer To Program Key On Inside Back Cover.*

FINANCIAL INFORMATION

1967–68 Fees: Tuition For Residents of District/State: $250 Non-Resident: $ 250

Tuition Plan Available? ______ Arrangement: Payable by quarter

Sources of Financial Aid: None

Range Of Stipends: ______ Average Stipend: ______

Co-Op Programs: Mid-Management Retailing and Automotive Service Technology

STUDENT PROFILE DATA

High School Rank of 1966 Freshman Class: Top Tenth ______; Top Quarter ______; Top Third ______; Top Half 100%; Top Two-Thirds ______;

Typical Employment Obtained By 1966 Graduates*: 34: Manufacturers; 47: Chain, Specialty & Department Stores

Number Of 1966 Graduates' Starting Salaries: Below $300 ______; $300-$399 ______; $400-$499 ______; $500-599 ______; $600 And Above ______

REMARKS

Communications Technology (Co-op) is to be offered beginning 1968-69.

COUNSELOR'S NOTES:

Students Interested In This School	Notes

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*Refer To Program Key On Inside Back Cover.

KENT STATE UNIVERSITY – ASHTABULA CAMPUS

ADDRESS: 3523 West 13th Street
Ashtabula, Ohio 44004

ADMINISTRATOR: Paul A. Reichert

TELEPHONE: (216) 964-3322

TITLE: Director

DESCRIPTIVE INFORMATION

Number Of Fall 1966 Students: Men 505 Women 363 Freshmen ______

Number Of Applicants For Fall 1966 Freshmen Class ______ Number Offered Admission ______

Approved Housing:

	Dormitory	*Private Rooms*	*YMCA/YWCA*	*Other*
Men:				
Women:				

Instructional Staff: Full–Time ______ Part–Time ______

Academic Calendar: Semester ______ Quarter X Trimester ______ Other ______

Summer Job Placement Service? Yes Graduate Placement Service? Yes Co–Op Program? ______

Baccalaureate Degree Credits Earned: Most

Suggested Time For Visitations: ______

ADMISSIONS REQUIREMENTS & PROCEDURES

Entrance Requirements: ______

Tests Required For Counseling/Placement And Median Score Of Accepted Applicants: ACT

Personal Interview Required? ______ School Visitation Required? ______

Recommended High School Courses*: ______

Suggested Date For Filing Application: ______ Deadline: ______

Deadline For Filing High School Transcript: ______

Application Fee: $ 25 Deadline: ______ Refundable? No

Deadline For Initial Deposit ______ Balance Due ______

Date Of Acceptance Notification To Applicant: ______

Deadline For Financial Aid Applications: ______

CURRICULA – 1966–67 Enrollment

Program*	Fresh.	U/Class.	Capacity

Program*	Fresh.	U/Class.	Capacity

Extra Curricular Activities Sponsored By School: ______

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* ***Refer To Program Key On Inside Back Cover.***

FINANCIAL INFORMATION

1967–68 Fees: Tuition For Residents of District/State: $______ Non-Resident: $ 450 per academic year
Tuition Plan Available? ______ Arrangement: ______
Sources of Financial Aid: ______
Range Of Stipends: ______ Average Stipend: ______
Co-Op Programs: ______

STUDENT PROFILE DATA

High School Rank of 1966 Freshman Class: Top Tenth ______; Top Quarter ______; Top Third ______;
Top Half ______; Top Two-Thirds ______;
Typical Employment Obtained By 1966 Graduates*: ______

Number Of 1966 Graduates' Starting Salaries: Below $300 ______; $300-$399 ______; $400-$499 ______;
$500-599 ______; $600 And Above ______

REMARKS

COUNSELOR'S NOTES:

Students Interested In This School	Notes

Refer To Program Key On Inside Back Cover.

KENT STATE UNIVERSITY – SALEM CAMPUS

ADDRESS: P. O. Box 91
Salem, Ohio 44460

ADMINISTRATOR: Thomas N. Cox

TELEPHONE: (216) 337-9519

TITLE: Director

DESCRIPTIVE INFORMATION

Number Of Fall 1966 Students: Men 221 Women 106 Freshmen 60

Number Of Applicants For Fall 1966 Freshmen Class ______ Number Offered Admission ______

Approved Housing:

	Dormitory	*Private Rooms*	*YMCA/YWCA*	*Other*
Men:		X		
Women:		X		

Instructional Staff: Full-Time 11 Part-Time ______

Academic Calendar: Semester ______ Quarter X Trimester ______ Other ______

Summer Job Placement Service? Yes Graduate Placement Service? Yes Co-Op Program? ______

Baccalaureate Degree Credits Earned: Most

Suggested Time For Visitations: Open

ADMISSIONS REQUIREMENTS & PROCEDURES

Entrance Requirements: High school graduate

Tests Required For Counseling/Placement And Median Score Of Accepted Applicants: ACT

Personal Interview Required? No School Visitation Required? No

Recommended High School Courses*: ______

Suggested Date For Filing Application: Open Deadline: September 1 for fall quarter

Deadline For Filing High School Transcript: ______

Application Fee: $ 25 Deadline: ______ Refundable? No

Deadline For Initial Deposit ______ Balance Due ______

Date Of Acceptance Notification To Applicant: ______

Deadline For Financial Aid Applications: ______

CURRICULA – 1966–67 Enrollment

Program*	Fresh.	U/Class.	Capacity

Program*	Fresh.	U/Class.	Capacity

Extra Curricular Activities Sponsored By School: ______

** Refer To Program Key On Inside Back Cover.*

FINANCIAL INFORMATION

1967–68 Fees: Tuition For Residents of District/State: $ _____ Non-Resident: $ 450 academic year
Tuition Plan Available? _____ Arrangement: _____
Sources of Financial Aid: Government and local committee loans
Range Of Stipends: $100-400 Average Stipend: $200
Co-Op Programs: _____

STUDENT PROFILE DATA

High School Rank of 1966 Freshman Class: Top Tenth _____; Top Quarter _____; Top Third _____;
Top Half _____; Top Two-Thirds _____; Top Three-Fourths _____
Typical Employment Obtained By 1966 Graduates*: 16: State Highway Dept., consulting engineers, architectural & contracting firms; 22: electrical & electronic mfg. firms, computer mfgs., 43: steel mill equip., industrial furnace, automotive equip. mfg. firms, research labs.
Number Of 1966 Graduates' Starting Salaries: Below $300 0; $300-$399 0; $400-$499 7;
$500-599 41; $600 And Above 0

REMARKS

The Engineering Technology program of the Kent State University Academic Center was the Salem School of Technology prior to August 8, 1966.

COUNSELOR'S NOTES:

Students Interested In This School	Notes

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*Refer To Program Key On Inside Back Cover.

LAKELAND COMMUNITY COLLEGE

ADDRESS: 7547 Mentor Avenue
Mentor, Ohio 44060

ADMINISTRATOR: Wayne Rodehorst

TELEPHONE: (216) 946-7000

TITLE: President

DESCRIPTIVE INFORMATION

Number Of Fall 1966 Students: Men 144 Women 16 Freshmen 101
Number Of Applicants For Fall 1966 Freshmen Class 132 Number Offered Admission 106

Approved Housing:	*Dormitory*	*Private Rooms*	*YMCA/YWCA*	*Other*
Men:		X		
Women:		X		

Instructional Staff: Full-Time 10 Part-Time 15
Academic Calendar: Semester ___ Quarter X Trimester ___ Other ___
Summer Job Placement Service? Yes Graduate Placement Service? Yes Co-Op Program? No
Baccalaureate Degree Credits Earned: Not in the purpose and philosophy of the program, but the environment for transferability does exist.
Suggested Time For Visitations: As arranged

ADMISSIONS REQUIREMENTS & PROCEDURES

Entrance Requirements: High school graduate

Tests Required For Counseling/Placement And Median Score Of Accepted Applicants: ACT

Personal Interview Required? ___ School Visitation Required? ___
Recommended High School Courses*:

Suggested Date For Filing Application: First semester senior year Deadline: Prior to high school graduation
Deadline For Filing High School Transcript: September 1 or until classes are filled
Application Fee: $ 5 Deadline: with application Refundable? No
Deadline For Initial Deposit Prior to admission Balance Due Beginning each quarter
Date Of Acceptance Notification To Applicant: Two weeks following completion of application
Deadline For Financial Aid Applications: June 30

CURRICULA – 1966–67 Enrollment

Program*	Fresh.	U/Class.	Capacity
1			
14			
20			
22			
23			
34			
43			
55			
59			

Program*	Fresh.	U/Class.	Capacity

Extra Curricular Activities Sponsored By School: Student Government, clubs, etc.

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* *Refer To Program Key On Inside Back Cover.*

FINANCIAL INFORMATION

1967–68 Fees: Tuition For Residents of District/State: $ 250 Non-Resident: $ 475/675
Tuition Plan Available? Yes Arrangement: $85 per quarter payable at beginning of each quarter
Sources of Financial Aid: Scholarships, grants-in-aid, and college employment
Range Of Stipends: $50-300 Average Stipend: $200
Co-Op Programs: None

STUDENT PROFILE DATA

High School Rank of 1966 Freshman Class: Top Tenth ______; Top Quarter ______; Top Third ______; Top Half ______; Top Two-Thirds ______; Top Three-Fourths ______
Typical Employment Obtained By 1966 Graduates*: ______

Number Of 1966 Graduates' Starting Salaries: Below $300 ______; $300-$399 ______; $400-$499 ______; $500-599 ______; $600 And Above ______

REMARKS

Chandler Technical School became the Technical Division of Lakeland Community College September, 1967.
Medical technology and nursing will be offered beginning 1968-69.

COUNSELOR'S NOTES:

Students Interested In This School	Notes

**Refer To Program Key On Inside Back Cover.*

LORAIN COUNTY COMMUNITY COLLEGE

ADDRESS: 1005 N. Abbe Road
Elyria, Ohio 44035

ADMINISTRATOR: Dr. Max J. Lerner

TELEPHONE: (216) 365-4191

TITLE: President

DESCRIPTIVE INFORMATION

Number Of Fall 1966 Students: Men 485 Women 225 Freshmen 537

Number Of Applicants For Fall 1966 Freshmen Class 710 Number Offered Admission 710

Approved Housing:	*Dormitory*	*Private Rooms*	*YMCA/YWCA*	*Other*
Men:		X	X	
Women:		X	X	

Instructional Staff: Full-Time 35 Part-Time 19

Academic Calendar: Semester X Quarter Trimester Other

Summer Job Placement Service? Yes Graduate Placement Service? Yes Co-Op Program? Yes

Baccalaureate Degree Credits Earned: Yes

Suggested Time For Visitations: 8:00 - 4:00 daily

ADMISSIONS REQUIREMENTS & PROCEDURES

Entrance Requirements: High school graduate

Tests Required For Counseling/Placement And Median Score Of Accepted Applicants: ACT; SAT

Personal Interview Required? Yes School Visitation Required? Yes

Recommended High School Courses*: 14,22: Math, Science; 34,43: Math, Science, Mech. Drawing; 1: Math, English; 9: English, Math, Science, Bookkeeping; 16: Math, Phy. Science, Mech. Drawing; 24: Math, Science, English, Basic Science; 47,59: Business

Suggested Date For Filing Application: Prior to high school grad. Deadline: Sept. 1 provided space available

Deadline For Filing High School Transcript: 2 weeks following filing of application

Application Fee: $ 5 Deadline: with application Refundable? No

Deadline For Initial Deposit Balance Due at registration

Date Of Acceptance Notification To Applicant: Within 2 weeks of interview

Deadline For Financial Aid Applications: After acceptance

CURRICULA – 1966–67 Enrollment

Program*	Fresh.	U/Class.	Capacity
1	44	12	
9	73	32	
10	41	1	
14	14	12	
16	27	9	
21	12	0	
22	62	12	
24	25	1	
34	30	17	
43	44	12	
44	17	2	

Program*	Fresh.	U/Class.	Capacity
47	48	15	
50	48	21	
59	41	19	

Extra Curricular Activities Sponsored By School: clubs, intercollegiate, and intramural athletics

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* *Refer To Program Key On Inside Back Cover.*

FINANCIAL INFORMATION

1967–68 Fees: Tuition For Residents of ~~District/State~~ County: $300 Non-Resident: $ 450/Out-Of-State: $650
Tuition Plan Available? Yes Arrangement:
Sources of Financial Aid: Col. & com. scholarships & grant-in-aids; privately sponsored loans; Federal grants; & Work-Study Program
Range Of Stipends: Average Stipend:
Co-Op Programs: Mid-Management Retailing

STUDENT PROFILE DATA

High School Rank of 1966 Freshman Class: Top Tenth ____; Top Quarter ____; Top Third ____; Top Half ____; Top Two-Thirds ____;
Typical Employment Obtained By 1966 Graduates*: 14: experimental lab, paint, chemical, engineering & mfg. companies; 16: draftsmen-construction & architectural firms; 22: communications, machinery, steel, shipbuilding & instrumentation mfgs.; 34: (See Remarks)
Number Of 1966 Graduates' Starting Salaries: Below $300 ____; $300-$399 ____; $400-$499 ____; $500-599 ____; $600 And Above ____ SEE "REMARKS"

REMARKS

Mean salaries of 1966 graduates:

ENGINEERING TECHNOLOGY: Chemical - $540; Civil - $461; Electrical - $508; Industrial - $455; Mechanical - $490

BUSINESS TECHNOLOGY: Accounting - $393; Data Processing - $442; Secretarial Science - $373

Typical Employment: (Con't):

foundries, heavy equipment, plastics, heating equip. mfgs.; 43: air brake, screw machine products, heavy machinery, industrial castings, meter, airplane & automotive parts mfgs.

COUNSELOR'S NOTES:

Students Interested In This School	Notes

Refer To Program Key On Inside Back Cover.

MANSFIELD SCHOOL OF TECHNOLOGY

ADDRESS: 218 Maron Avenue
Mansfield, Ohio 44903

ADMINISTRATOR: Henry R. Fallerius

TELEPHONE: (419) 525-1090

TITLE: Director

DESCRIPTIVE INFORMATION

Number Of Fall 1966 Students: Men 78 Women 2 Freshmen 53
Number Of Applicants For Fall 1966 Freshmen Class ____ Number Offered Admission ____

Approved Housing:	*Dormitory*	*Private Rooms*	*YMCA/YWCA*	*Other*
Men:		X	X	
Women:		X	X	

Instructional Staff: Full-Time 9 Part-Time 4
Academic Calendar: Semester ____ Quarter X Trimester ____ Other ____
Summer Job Placement Service? Yes Graduate Placement Service? Yes Co-Op Program? Yes
Baccalaureate Degree Credits Earned: ____

Suggested Time For Visitations: 8:00 - 4:00 Monday - Friday

ADMISSIONS REQUIREMENTS & PROCEDURES

Entrance Requirements: Consult catalog

Tests Required For Counseling/Placement And Median Score Of Accepted Applicants: EPSAT; DAT

Personal Interview Required? Yes School Visitation Required? No
Recommended High School Courses*: ____

Suggested Date For Filing Application: Sept.-Dec. of senior year Deadline: Aug. 31 or mo. prior to beg. of term
Deadline For Filing High School Transcript: Same
Application Fee: $ 12 Deadline: with application Refundable? No
Deadline For Initial Deposit with application Balance Due At registration
Date Of Acceptance Notification To Applicant: Following completion of admissions procedure
Deadline For Financial Aid Applications: June 1 or one quarter prior to entering.

CURRICULA – 1966–67 Enrollment

Program*	Fresh.	U/Class.	Capacity
22	10	8	24
43	17	8	25
46	4	3	25
55	8	4	40

Program*	Fresh.	U/Class.	Capacity

Extra Curricular Activities Sponsored By School: Student Council, yearbook, intramurals, YMCA-YWCA sponsored activities.

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* *Refer To Program Key On Inside Back Cover.*

FINANCIAL INFORMATION

1967–68 Fees: Tuition For Residents of District/State: $ 100/quar Non-Resident: $ Same

Tuition Plan Available? ________ Arrangement: ________

Sources of Financial Aid: Consult catalog

Range Of Stipends: ________ Average Stipend: ________

Co-Op Programs: Retail management

STUDENT PROFILE DATA

High School Rank of 1966 Freshman Class: Top Tenth ________; Top Quarter ________; Top Third ________; Top Half ________; Top Two-Thirds ________;

Typical Employment Obtained By 1966 Graduates*: 22,23,25,41,42,43,46,47,53,55,62

Number Of 1966 Graduates' Starting Salaries: Below $300 0; $300-$399 0; $400-$499 10; $500-599 12; $600 And Above 0

REMARKS

COUNSELOR'S NOTES:

Students Interested In This School	Notes

Refer To Program Key On Inside Back Cover.

MIAMI UNIVERSITY – MIDDLETOWN CAMPUS

ADDRESS: 4200 Manchester Road
Middletown, Ohio 45042

ADMINISTRATOR: Dr. Carl Eugene Bennett

TELEPHONE: (513) 422-2741

TITLE: Director

DESCRIPTIVE INFORMATION

Number Of Fall 1966 Students: Men 807 Women 580 Freshmen 812
Number Of Applicants For Fall 1966 Freshmen Class 1560 Number Offered Admission 1439

Approved Housing:	*Dormitory*	*Private Rooms*	*YMCA/YWCA*	*Other*
Men:		X	X	Apartments
Women:				

Instructional Staff: Full–Time 55 Part–Time 66
Academic Calendar: Semester ____ Quarter ____ Trimester X Other ____
Summer Job Placement Service? Yes Graduate Placement Service? Yes Co–Op Program? No
Baccalaureate Degree Credits Earned: All course work is fully applicable toward the Bachelor's Degree.
Suggested Time For Visitations: 8:00 - 5:00 Monday - Friday; 8:00 - 12:00 Saturday

ADMISSIONS REQUIREMENTS & PROCEDURES

Entrance Requirements: High school graduate; 16 units of study, at least 10 earned in English, speech, math, science, history, social studies, or foreign language.
Tests Required For Counseling/Placement And Median Score Of Accepted Applicants: ACT (18.9 Composite Standard Score)
Personal Interview Required? No School Visitation Required? Recommended
Recommended High School Courses*: 14,22,23,34,43,46,59: 2 units Algebra, 1 unit Chemistry or Physics

Suggested Date For Filing Application: Senior year Deadline: September 1
Deadline For Filing High School Transcript: September 1
Application Fee: $15 Deadline: ____ Refundable? No
Deadline For Initial Deposit August 15 Balance Due September 6
Date Of Acceptance Notification To Applicant: Within 2 weeks after receiving transcript
Deadline For Financial Aid Applications: June 15

CURRICULA – 1966–67 Enrollment

Program*	Fresh.	U/Class.	Capacity
34	105	21	200
59	19	2	50

Program*	Fresh.	U/Class.	Capacity

Extra Curricular Activities Sponsored By School: Student Government; newspaper, interest clubs, intramural athletics, lecture series, and social events.

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* *Refer To Program Key On Inside Back Cover.*

FINANCIAL INFORMATION

1967–68 Fees: Tuition For Residents of District/State: $ 480 Non-Resident: $ 980
Tuition Plan Available? No Arrangement: ____
Sources of Financial Aid: Scholarships and loans, Federal Oppor. Grants, Campus Empl. Work-Study Pro.
Range Of Stipends: $50-1000 Average Stipend: $250
Co-Op Programs: None

STUDENT PROFILE DATA

High School Rank of 1966 Freshman Class: Top Tenth 11%; Top Quarter 26%; Top Third 31%;
Top Half 55%; Top Two-Thirds 78%;
Typical Employment Obtained By 1966 Graduates*: ____

Number Of 1966 Graduates' Starting Salaries: Below $300 ____; $300-$399 ____; $400-$499 ____;
$500-599 ____; $600 And Above ____

REMARKS

The Middletown Campus opened in September, 1966 and the Associate Degrees will be awarded in April, 1968.

COUNSELOR'S NOTES:

Students Interested In This School	Notes

Refer To Program Key On Inside Back Cover.

MIAMI VALLEY INSTITUTE OF TECHNOLOGY

ADDRESS: 332 Dayton Street
Hamilton, Ohio 45012

ADMINISTRATOR: Al C. Woedl

TELEPHONE: (513) 894-9934

TITLE: Director

DESCRIPTIVE INFORMATION

Number Of Fall 1966 Students: Men 59 Women 0 Freshmen 41
Number Of Applicants For Fall 1966 Freshmen Class 60 Number Offered Admission 41

Approved Housing:	*Dormitory*	*Private Rooms*	*YMCA/YWCA*	*Other*
Men:		X	X	
Women:		X	X	

Instructional Staff: Full-Time 0 Part-Time 25
Academic Calendar: Semester ____ Quarter X Trimester ____ Other ____
Summer Job Placement Service? Yes Graduate Placement Service? Yes Co-Op Program? Yes
Baccalaureate Degree Credits Earned: None

Suggested Time For Visitations: Open

ADMISSIONS REQUIREMENTS & PROCEDURES

Entrance Requirements: High school graduate or equivalent and well-grounded in high school courses leading into the technology
Tests Required For Counseling/Placement And Median Score Of Accepted Applicants: GATB

Personal Interview Required? Yes School Visitation Required? Recommended
Recommended High School Courses*: 22,43: Algebra I, Geometry I, lab. Science, Physics or Chemistry

Suggested Date For Filing Application: Anytime Deadline: September
Deadline For Filing High School Transcript: with application
Application Fee: $ None Deadline: N/A Refundable? N/A
Deadline For Initial Deposit When accepted Balance Due Before start of quarter
Date Of Acceptance Notification To Applicant: as soon as possible
Deadline For Financial Aid Applications: None

CURRICULA — 1966-67 Enrollment

Program*	Fresh.	U/Class.	Capacity
22	14	5	40
43	16	6	40

Extra Curricular Activities Sponsored By School: Student Government

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* *Refer To Program Key On Inside Back Cover.*

FINANCIAL INFORMATION

1967–68 Fees: Tuition For Residents of District/State: $ 270 Non-Resident: $ 300
Tuition Plan Available? Yes Arrangement: By quarter
Sources of Financial Aid: Scholarships and sponsorships
Range Of Stipends: ______ Average Stipend: ______
Co-Op Programs: Retail Mid-Management; others summer co-op

STUDENT PROFILE DATA

High School Rank of 1966 Freshman Class: Top Tenth ______; Top Quarter ______; Top Third ______; Top Half 100%; Top Two-Thirds ______;
Typical Employment Obtained By 1966 Graduates*: 22: electrical draftsman, engineering aide, electrical maint., lab testing; 43: engineering draftsman, manufacturing training, purchasing, quality control
Number Of 1966 Graduates' Starting Salaries: Below $300 0; $300-$399 0; $400-$499 5; $500-599 3; $600 And Above 1

REMARKS

Note name change from Hamilton Technical School to Miami Valley Institute of Technology.

The following new programs have been initiated: Industrial, Retail Mid-Management, and Secretarial Science.

COUNSELOR'S NOTES:

Students Interested In This School	Notes

Refer To Program Key On Inside Back Cover.

NORTHEAST TECHNICAL INSTITUTE

ADDRESS: 4325 Park Street
Ashtabula, Ohio 44004

ADMINISTRATOR: William J. Ryan

TELEPHONE: (216) 964-9246

TITLE: Director

DESCRIPTIVE INFORMATION

Number Of Fall 1966 Students: Men 60 Women 0 Freshmen 40
Number Of Applicants For Fall 1966 Freshmen Class 55 Number Offered Admission 40

	Dormitory	*Private Rooms*	*YMCA/YWCA*	*Other*
Approved Housing:	None			
Men:				
Women:				

Instructional Staff: Full-Time 2 Part-Time 10
Academic Calendar: Semester ____ Quarter X Trimester ____ Other ____
Summer Job Placement Service? Yes Graduate Placement Service? Yes Co-Op Program? No
Baccalaureate Degree Credits Earned: Courses are on the college level with the purpose of preparation for technical employment.
Suggested Time For Visitations: Daily during class sessions

ADMISSIONS REQUIREMENTS & PROCEDURES

Entrance Requirements: High school graduation, or equivalent, good mechanical interest and aptitude, and ability to reason analytically.
Tests Required For Counseling/Placement And Median Score Of Accepted Applicants: EPSAT (50 raw score)
Personal Interview Required? Yes School Visitation Required? Yes
Recommended High School Courses*: All Technologies: 1 unit Algebra, Basic Trigonometry, Physics or Chemistry, Mechanical Drawing
Suggested Date For Filing Application: July 1 Deadline: August 15
Deadline For Filing High School Transcript: August 30
Application Fee: $ 2 Deadline: July 15 Refundable? No
Deadline For Initial Deposit August 15 Balance Due September 15
Date Of Acceptance Notification To Applicant: July 1 (for Pre-Tech enrollees); August 15 for others
Deadline For Financial Aid Applications: Anytime

CURRICULA – 1966–67 Enrollment

Program*	Fresh.	U/Class.	Capacity
43	16	18	50
23	14	6	50

Program*	Fresh.	U/Class.	Capacity

Extra Curricular Activities Sponsored By School: Students' Social Club; intramural athletics

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*** Refer To Program Key On Inside Back Cover.***

FINANCIAL INFORMATION

1967–68 Fees: Tuition For Residents of District/State: $110/quar. Non-Resident: $ 115 quar.
Tuition Plan Available? Yes Arrangement: Per satisfactory arrangement
Sources of Financial Aid: Scholarship Fund and company scholarships
Range Of Stipends: full cost Average Stipend: 1/2 costs
Co-Op Programs: ______

STUDENT PROFILE DATA

High School Rank of 1966 Freshman Class: Top Tenth 5%; Top Quarter 25%; Top Third ______; Top Half ______; Top Two-Thirds 100%;
Typical Employment Obtained By 1966 Graduates*: 23: aircraft industry, electrical equip. mfg.; 43: electric motor & plastic molding mfgs.

Number Of 1966 Graduates' Starting Salaries: Below $300 0; $300-$399 0; $400-$499 8; $500-599 2; $600 And Above 0

REMARKS

Note name change from Ashtabula Technical School to Northeast Technical Institute.

COUNSELOR'S NOTES:

Students Interested In This School	Notes

Refer To Program Key On Inside Back Cover.

PENTA COUNTY TECHNICAL INSTITUTE

ADDRESS: Oregon Road
Perrysburg, Ohio 43551

ADMINISTRATOR: Dr. William L. Ramsey

TELEPHONE: (419) 698-1531

TITLE: President

DESCRIPTIVE INFORMATION

Number Of Fall 1966 Students: Men 465 Women 40 Freshmen 400

Number Of Applicants For Fall 1966 Freshmen Class 427 Number Offered Admission 400

Approved Housing:	*Dormitory*	*Private Rooms*	*YMCA/YWCA*	*Other*
Men:	X			
Women:				

Instructional Staff: Full-Time 20 Part-Time 15

Academic Calendar: Semester ____ Quarter X Trimester ____ Other ____

Summer Job Placement Service? Yes Graduate Placement Service? Yes Co-Op Program? Yes

Baccalaureate Degree Credits Earned: Transfer under the provisions of the Ohio Board of Regents

Suggested Time For Visitations: Open

ADMISSIONS REQUIREMENTS & PROCEDURES

Entrance Requirements: High school graduate or equivalent

Tests Required For Counseling/Placement And Median Score Of Accepted Applicants: ACT; SAT; PAT; Wonderlic; Cooperative Math Achievement

Personal Interview Required? Yes School Visitation Required? Yes

Recommended High School Courses*: Engineering Technologies: Algebra, Trigonometry, Physics or Chemistry, 3 units English; 11: Bookkeeping

Suggested Date For Filing Application: July 31 Deadline: August 31

Deadline For Filing High School Transcript: August 31

Application Fee: $15 Deadline: August 31 Refundable? No

Deadline For Initial Deposit all fees must [illegible] by Sept. 12 Balance Due N/A

Date Of Acceptance Notification To Applicant: August 31

Deadline For Financial Aid Applications: August 31

CURRICULA – 1966–67 Enrollment

Program*	Fresh.	U/Class.	Capacity
25	175	53	
11	162	41	
Food Tech.	51	23	

Program*	Fresh.	U/Class.	Capacity

Extra Curricular Activities Sponsored By School: Basketball team and intramural athletics

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*** Refer To Program Key On Inside Back Cover.***

FINANCIAL INFORMATION

1967–68 Fees: Tuition For Residents of School District/~~State~~: $ 143 ~~Non~~-Resident of Ohio $ 148 Out-Of-State: $263

Tuition Plan Available? Yes Arrangement: Per arrangement with Business Office

Sources of Financial Aid:

Range Of Stipends: Average Stipend:

Co-Op Programs: All programs are cooperative

STUDENT PROFILE DATA

High School Rank of 1966 Freshman Class: Top Tenth ; Top Quarter ; Top Third ; Top Half ; Top Two-Thirds ;

Typical Employment Obtained By 1966 Graduates*:

Number Of 1966 Graduates' Starting Salaries: Below $300 0 ; $300-$399 0 ; $400-$499 0 ; $500-599 26 ; $600 And Above 22

REMARKS

COUNSELOR'S NOTES:

Students Interested In This School	Notes

Refer To Program Key On Inside Back Cover.

THE UNIVERSITY OF TOLEDO

ADDRESS: Toledo, Ohio 43606
ADMINISTRATOR: Dr. Theodore B. Wilson

TELEPHONE: (419) 531-5711
TITLE: Assoc. Dean for Instruction

DESCRIPTIVE INFORMATION

Number Of Fall 1966 Students: Men 2002 Women 734 Freshmen 1068
Number Of Applicants For Fall 1966 Freshmen Class 2002 Number Offered Admission 2002

Approved Housing:	*Dormitory*	*Private Rooms*	*YMCA/YWCA*	*Other*
Men:	X			
Women:	X			

Instructional Staff: Full-Time 47 Part-Time 76
Academic Calendar: Semester X Quarter ___ Trimester ___ Other ___
Summer Job Placement Service? Yes Graduate Placement Service? Yes Co-Op Program? No
Baccalaureate Degree Credits Earned: Approximately half of each program consists of General Education and Science courses which normally will transfer.
Suggested Time For Visitations: Open

ADMISSIONS REQUIREMENTS & PROCEDURES

Entrance Requirements: Open door

Tests Required For Counseling/Placement And Median Score Of Accepted Applicants: Nelson-Denny Reading; Cooperative Algebra Test

Personal Interview Required? No School Visitation Required? No
Recommended High School Courses*: 9,40,45,53,55: Typing; 29,39,56,59: Typing, Shorthand; 8,16,23,25,31,35,37,41: Algebra, Trigonometry

Suggested Date For Filing Application: June 1 Deadline: September 1
Deadline For Filing High School Transcript: Beginning of semester
Application Fee: $ 15 Deadline: September 1 Refundable? No
Deadline For Initial Deposit September 1 Balance Due September 9
Date Of Acceptance Notification To Applicant:
Deadline For Financial Aid Applications:

CURRICULA – 1966–67 Enrollment

Program*	Fresh.	U/Class.	Capacity	Program*	Fresh.	U/Class.	Capacity

Extra Curricular Activities Sponsored By School: athletics, music, Rockettes, and honor and social societies

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*** Refer To Program Key On Inside Back Cover.***

FINANCIAL INFORMATION

SEE "REMARKS"
1967–68 Fees: Tuition For Residents of District/State: $ ______ Non-Resident: $ ______
Tuition Plan Available? Yes Arrangement: Deposit for dorm
Sources of Financial Aid: Loans and scholarships
Range Of Stipends: ______ Average Stipend: ______
Co-Op Programs: None

STUDENT PROFILE DATA

High School Rank of 1966 Freshman Class: Top Tenth ______; Top Quarter ______; Top Third ______; Top Half ______; Top Two-Thirds ______;
Typical Employment Obtained By 1966 Graduates*: ______

Number Of 1966 Graduates' Starting Salaries: Below $300 ______; $300-$399 ______; $400-$499 ______; $500-599 ______; $600 And Above ______

REMARKS

Fees for state residents:	per credit hour instructional fee	- $15; Student services $4; (maximum of $48).
Fees for non-state residents:	per credit hour instructional fee	- $15; Tuition - $18; Student services $4; (maximum of $48).

COUNSELOR'S NOTES:

Students Interested In This School	Notes

Refer To Program Key On Inside Back Cover.

APPENDICES

APPENDIX A

PUBLIC TECHNICAL EDUCATION IN OHIO

The evolving role of the workforce in our technological society has created an unprecedented demand for a newly conceived specialist - the technician. Technical education is perhaps the most recent innovation in the education community and its ramifications are indeterminable. We have traditionally perceived the role of the technician as being limited to the highly exacting fields of engineering, science and medicine, however, experts advise that labor market demands will soon be evident for these specialists in virtually every occupational field employing professional workers. The status of public technical education in the State of Ohio is described by Dr. Byrl R. Shoemaker, Director, Division of Vocational Education, Ohio Department of Education.

> The changing job patterns in the professional fields have brought about increased educational requirements in preparation for the professions. The importance of using such professional workers at their highest level of performance gave rise to the need for persons to support the effort of the professional workers. Technicians serve this purpose by performing a portion of the tasks, related to the profession, which do not require the depth of education required for the professional worker. The technician, therefore, becomes a para-professional worker, a person who works alongside of the professional person.
>
> The future of prosperity of Ohio is tied in closely with the development of business and industry. The development of business and industry depends, in a large measure, upon the availability of trained manpower. Fifteen thousand new technicians are needed each year to meet the needs of our expanding and changing pattern of employment in business and industry.
>
> The State Board of Regents is responsible for the approval of technical education programs leading to the granting of the associate degree. The Division of Vocational Education, State Board of Education, also has a legal and financial commitment to technical education and works cooperatively with the State Board of Regents in the development and support of such programs.[1]

The Ohio Board of Regents and the Ohio Department of Education envision the following to be the role of technical education in the State of Ohio.

> Technical education is a post-high school program planned to prepare high school graduates for entrance into para-professional occupations as support personnel for professional practitioners. Such occupations are concerned with design, development, testing, consulting, and supervision. Technical education, in comparison to vocational education, gives the major program emphasis to the acquisition of scientific and technical knowledge with work skills as a corollary. Persons are prepared for entrance into employment as technicians through two-year post-high school technical programs in one of three types of

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[1] "Ohio's Technical Education Program." Columbus: Division of Vocational Education, Ohio Department of Education. 1967. Page 2.

institutions--the community college, the technical institute, or the university branch. While certain areas of instruction in technical education may be transferable to a baccalaureate program in a university or college, the program organization and content of the technical program must remain true to its unique goal and function. The academic community which tends to grant status only to baccalaureate and graduate programs must not allow the technical education programs to develop into poor quality, indifferently operated activities. The successful completion of the technical education program results in the award of the associate degree. The organization and operation to technical education recognized by the associate degree is the responsibility of the Ohio Board of Regents, with cooperation and assistance from the Division of Vocational Education, State Department of Education.[2]

The institutions included in this publication are administered locally by a board of education or board of trustees and meet the standards prescribed by either the Ohio Board of Regents or the Ohio Department of Education. These institutions are under the direction of either or both of these two state-level agencies:

Ohio Board of Regents [3]

The University of Akron
Univ. of Cinn.-Univ. College
Univ. of Cinn.-Walters Branch
Clark County Tech. Institute
Columbus Technical Institute
Cuyahoga Community College
Kent State Univ.-Ashtabula
Kent State Univ.-Salem
Lorain County Community College
Miami Univ.- Middletown
Penta County Technical Institute
The University of Toledo

Ohio Department of Education

Ashtabula Technical Inst.
Canton Area Technical School
Chandler Technical School
Cinn. Coop. School of Tech.
Clark County Tech. Institute
Cleveland Technician School
Columbus Technical Institute
Dayton Technical Center
Kent State Univ.-Salem
Lorain County Technical School
Mansfield School of Technology
Miami Valley Tech. Institute
Penta County Technical Institute
Univ. of Cinn.-Univ. College

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[2] "Memorandum of Understanding on Technical and Vocational Education between The Ohio Board of Regents and The Ohio Department of Education." Columbus. 1967.

[3] One institution approved by the Ohio Board of Regents did not desire to participate in this publication.

APPENDIX B

DESCRIPTIONS OF TYPICAL TECHNICIAN PROGRAMS OFFERED IN OHIO

Accounting Technician program prepares graduates to apply principles of accounting and to maintain operation of the general accounting system. They may specialize in budget, cost, machine processing, or tax accounting aspiring to supervisory or managerial positions. The program is a two-year sequence of accounting and communication courses with laboratory experience using mechanical and electrical machines.

Aerospace Technician course of study prepares graduates to qualify for the "A&P" (aircraft and powerplant mechanic) license and provides additional advanced technical knowledge required for such positions as aircraft and powerplant specialist, airplane inspector, flight engineer, and other positions requiring combinations of "A&P" license and technical specialization.

Agri-Business Technician program trains specialists in grading, processing, and marketing of grain, horticulture production and marketing, nursery production sales and service, agricultural machinery and services, or farm credit management. These individuals may be trained to serve as specialists who would deal with farmers. They may study the purchase and use of materials and equipment and make recommendations to farmers or be employed in elevators or feed and farm stores.

Agricultural Equipment Technician program prepares graduates to select, demonstrate, install, and maintain agricultural equipment and to have the ability to utilize technical bulletins and manuals related to the agricultural equipment and mechanics industry. They will have the understanding of the principles of business organization, management, and agricultural economics applicable to the business. Opportunities for employment include farm equipment sales and service, farmstead mechanization, retail and wholesale salesman, foreman and supervisor, and management positions.

Architectural Drafting Technician program prepares the graduate to work with engineers and architects in the drawing and designing of buildings. The work is concerned with the drafting room in particular, but could lead to work in the field such as inspection and supervision on construction sites.

Chemical Technician program trains graduates to work with chemists and chemical engineers in the development, production, sale, and utilization of chemical products and equipment. They may help to conduct chemical experiments by making tests or by computing, compiling, and analyzing results. In testing work, technicians may make chemical tests to determine if particular substances are present and in what quanities.

Child Development Technician program follows a sequence of class and laboratory experiences designed to increase the graduate's understanding of young children in relation to their care and education. Program emphasis is in teaching and organization of nursery school and day care centers.

Civil Engineering Technician program prepares graduates to assist civil engineers in the design, layout, and construction of streets, sewage and water systems, and other municipal facilities. They may conduct and prepare studies of traffic control and building construction growth, as well as test and inspect materials, survey and subdivide land, and prepare maps.

Data Processing and Computer Technician program prepares graduates to be a programmer who prepares the detailed instructions needed to direct the computer's operations. The programmer usually starts the job by conferring with professional staff members who are in a position to furnish detailed information about the problem. The technician then makes a flow chart, or diagram, showing the order in which the computer must perform each operation. Detailed instructions are prepared for each operation which are transferred to the computer's memory and which tell the machine exactly how to use all of the data associated with the problem.

Dental Hygiene Technician program prepares for employment as a dental hygienist in a dentist's office, clinic or school. Specific requirements of the course qualify the graduate to take the state examination for lincensure as a Registered Dental Hygienist.

Electrical Technician program prepares the graduate to work with electrical engineers in the designing, testing, and modification of new electrical equipment and products. They may prepare plans and diagrams for the wiring of electrical machinery and control circuits, sell electrical equipment or work in operation control of power stations and distribution systems.

Electronics Technician program leads to employment in the field of communication electronics. Graduates may assist the electronic engineer in such activities as the operation of electronic equipment, design and development of electronic products, and in production processes related to electronics. Their activities may be directly related to radio or television communications or they may sell electronics equipment or be field consultants to customers.

Food Processing Technician program is designed to train graduates to assist in quality control, inspection, research and development, and plant management in the food processing industry. Technicians will be oriented regarding laboratory procedures with emphasis on quality measurements, assurance and analysis.

Food Service Management Technician program is designed for persons preparing for supervisory positions in hospitals, schools, nursing and retirement homes, and industrial and commercial institutions. Practical experiences are provided in the curriculum.

Graphic Communications Technician curriculum prepares graduates for the graphic arts industry. The basic fundamentals as well as specific competencies related to the graphic arts field are emphasized in the program. Typical job classifications open to graduates are quality control, cost control, management trainee, estimator, and assistant to purchasing agent.

Horticulture Technician program provides training to enter para-professional positions in the following occupational areas: landscaping, turf and parks management, floral and nursery plant culture and sales. Specific job opportunities include production supervisor, laboratory technician, greenhouse operator, sales and service, landscape design, and nursery foreman.

Industrial Technician program prepares graduates to make statistical studies and analyses of production cost, to periodically check a product's conformity to specifications, to devise ways of improving tool and machine efficiency, or to determine wage incentives. They may be concerned with plant location, equipment layout, control methods, materials handling, or job evaluation. Production improvement is of prime concern.

Mechanical Design Technician program is oriented to train engineering designers, design aides, and engineering aides to analyze, read, develop and communicate about the plans and problems of the designer, engineer, fabricator and contractor, and to translate their ideas into working drawing or engineering concepts.

Mechanical Technician program prepares graduates to perform work in the fields of tool and machine designing, technical selling, and laboratory testing. They may originate and prepare sketches for tools, jigs, dies or other attachments used in machine operation. When planning and carrying out tests of performance, durability, and efficiency on experimental engines and equipment, the technician is often required to use testing apparatus, to prepare and interpret drawings, and to write reports.

Metallurgical Technician program includes courses designed to prepare the individual to work in the metals industry. After completing courses in basic and advanced theory as well as practical experience, the graduate of this program is qualified to enter such positions as foundry lab technician, metallurgical research technician, and metallurgical assistant.

Nursing (Registered) program involves preparation for the Associate Degree in Nursing. Classroom instruction and supervised patient care are included in the program preparing the technician for employment in many of the nursing fields. Upon successful completion of the program, the graduate may take the Registered Nurse State Board Examination for the Registered Nurse Certificate.

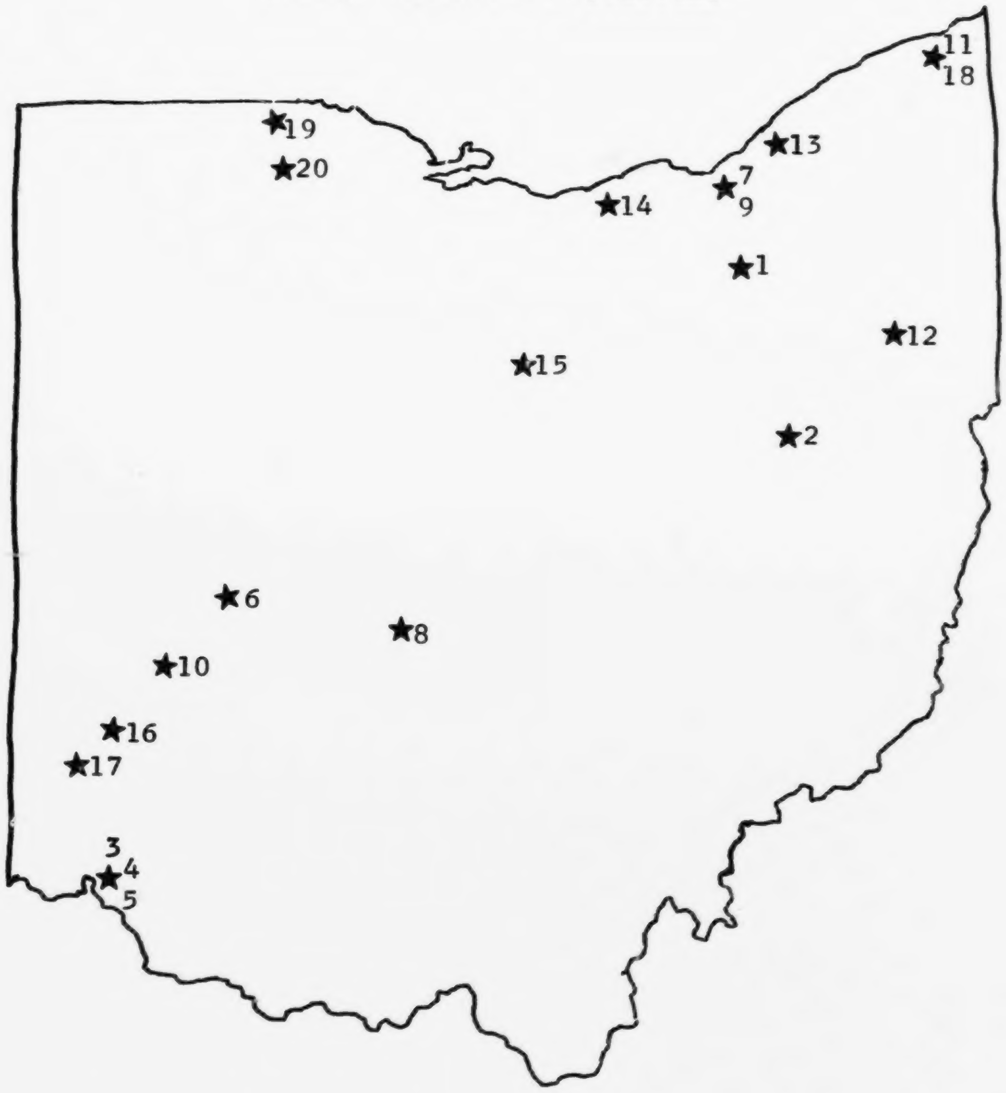
Retail Technician program is designed to train graduates for retail supervision and managerial positions in areas such as advertising, display selling, and personnel relations.

Secretarial Science Technician program includes training in such activities as scheduling appointments, taking dictation, typing, filing, and general office work and supervision. Specialization is necessary to qualify for positions in the medical, legal, and other technical fields.

Wholesale Mid-Management Technician program prepares graduates to perform work related to such activities as business administration, marketing, business economics, selling, advertising, and personnel management. Classroom instruction and on-the-job training are combined to educate students for mid-management positions in the wholesaling of such diversified products as groceries, candy, toys, heating and air conditioning equipment, electronics, paper products, sports goods, shoes, lumber, drugs, and service supplies.

APPENDIX C

GEOGRAPHIC LOCATIONS OF OHIO'S PUBLIC TECHNICAL INSTITUTES



KEY TO MAP

1 The University of Akron

2 Canton Area Technical School

3 Cinn. Coop. School of Tech.

4 Univ. of Cinn.-Univ. College

5 Univ. of Cinn.-Walters Branch

6 Clark County Tech. Institute

7 Cleveland Technician School

8 Columbus Technical Institute

9 Cuyahoga Community College

10 Dayton Technical Center

11 Kent State Univ.- Ashtabula

12 Kent State Univ.-Salem

13 Lakeland Community College

14 Lorain Cty. Comm. College

15 Mansfield School of Tech.

16 Miami Univ.-Middletown

17 Miami Valley Inst. of Tech.

18 Northeast Technical Institute

19 Penta County Technical Institute

20 The University of Toledo

APPENDIX D

TESTS REQUIRED FOR COUNSELING/PLACEMENT

	ACE	ACT	ATP2	CAT	CMA	CTMM	DAT	EPSAT	GATB	GCT	MAT	NDR	OTIS	PAT	PTMA	RPAT	SAT	SRA	WOND.
The University of Akron		X															X		
Canton Area Technical School	X							X											
Cinn. Coop. School of Tech.							X												
Univ. of Cinn.-Univ. College		X															X		
Univ. of Cinn.-Walters Br.		X															X		
Clark County Tech. Inst.								X		X						X			
Cleveland Technician School											X		X					X	
Columbus Technical Institute		X	X																
Cuyahoga Community College		X																	
Dayton Technical Center						X	X								X				
Kent State Univ.-Ashtabula		X																	
Kent State Univ.-Salem		X																	
Lakeland Community College		X																	
Lorain Cty. Comm. College		X															X		
Mansfield School of Tech.							X	X											
Miami Univ.-Middletown		X																	
Miami Valley Inst. of Tech.									X										
Northeast Technical Institute								X											
Penta County Tech. Inst.		X			X									X			X		X
The University of Toledo				X								X							
TOTAL	1	11	1	1	1	1	3	4	1	1	1	1	1	1	1	1	5	1	1

ABBREVIATION USED FOR TEST TITLES

ACE	American Council on Educ. Psychological Exam. for College Freshman
ACT	American College Testing Program Examination
ATPP	IBM Aptitude Test for Programmer Personnel
CAT	Cooperative Algebra Test
CMA	Cooperative Mathematics Achievement Test
CTMM	California Test of Mental Maturity
DAT	Differential Aptitude Tests
EPSAT	Engineering & Physical Science Aptitude Test
GATB	General Aptitude Test Battery
GCT	General Clerical Test
MAT	Multiple Aptitude Tests
NDR	Nelson-Denny Reading Test
OTIS	Otis Quick-Scoring Mental Ability Tests
PAT	Programmers Aptitide Test
PTMA	Prognostic Test of Mechanical Abilities
RPAT	Revised Programmer Aptitude Test
SAT	Scholastic Aptitude Test (CEEB)
SRA	Science Research Associates - Primary Mental Abilities Test
WOND.	Wonderlic Personnel Test

APPENDIX E

AVAILABLE RESOURCES REGARDING TECHNICAL EDUCATION

The following represent a portion of those resources available to educators and prospective students of technical education. This constitutes an attempt to identify only those resources providing broad coverage of educational programs and occupations embraced by technical education.

PUBLICATIONS

"Ohio's Technical Education Program." 1967. Brochure. 14 pages. Free. Division of Vocational Education, Ohio Department of Education, 612 State Departments Building, Columbus, Ohio 43215.

> This brochure describes the technical education programs embraced by the following services: Agricultural Education, Business and Office Education, Distributive Education, Home Economics, and Trade and Industrial Education.

Technical Education Yearbook, 1965-1966. 180 pages. Cloth $10.00. Prakken Publications, Inc., 416 Longshore Drive, Ann Arbor, Michigan 48107.

> The directory in this edition lists 835 public and private institutions and their curricula, admissions requirements, accreditation, enrollments per programs, administrator, etc. New case studies of programs of technical education programs now in operation as well as new developments and trends in this field are discussed.

Barron's Guide to the Two-Year Colleges. Seymour Eskow. 1967. 368 pages. Paper $3.50. Barron's Education Services, Inc., 113 Crossways Park Drive, Woodbury, New York 11797.

> Data requiring 859 two-year colleges are contained in this revised edition. The following information is listed for each institution: admissions, enrollment, affiliation, physical plant, costs, financial aid, curricular programs, graduation requirements, etc. "The Vocational Program Selector" section indicates institutional offerings per curricular category.

American Junior Colleges, 7th Edition. Edmund J. Gleazer, Jr. (Ed.). July 1967. 900 pages. Cloth $14.00. American Council on Education, 1785 Massachusetts Avenue, Washington, D.C. 20036.

> All public and private nonprofit junior colleges in the nation recognized by regional or state accrediting agencies are described. It provides data on curricula offered, staff, fees, student aid, history, enrollment, academic calendar, library facilities, graduation requirements, etc.

Directory of the National Association of Trade and Technical Schools. 1967. 32 pages. Free. National Association of Trade and Technical Schools, 1601 18th Street, N.W., Washington, D.C. 20009.

The following data are provided on the member institutions of NATTS: name of administrator, date of founding, approval by public and governmental agencies, curricula, and enrollment.

Publications by the National Council of Technical Schools, 1507 "M" Street, N.W., Washington, D.C. 20005:

Directory of Technical Courses. 1967. Brochure. Free. This directory contains a list of institutions and programs which have been approved by the National Council of Technical Schools.

Engineering Technology Careers. 1966. 32 pages. Single copies free to educators. It describes 15 major career fields and discusses the growth and present status of engineering technology education, typical curricula, admission requirements, and employment opportunities for graduates.

Career Field Monographs have been prepared on the following technologies embraced by engineering: aeronautical, civil, drafting, electronics, and electrical power (5 cents each, 50 for $1.50). Career fields not listed above are described in NCTS Publication No. 1065, "Engineering Technology Careers," (50 cents).

List of Accredited Curricula Leading to Degrees in Engineering Technology in the United States, 1966. Brochure. Free. Engineering Technology Committee, Engineers' Council for Professional Development, 345 East 47th Street, New York, New York 10017.

This contains a listing of accredited engineering technology programs per institution.

United States Government Publications available from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.

Dictionary of Occupational Titles. A two-volume dictionary defining 23,000 different occupations in over 230 different industries. It classifies occupations according to the newly devised six-digit code system. Volume I: "Definition of Titles," $5.00 per copy. Volume II: "Occupational Classifications," $4.25 per copy.

Occupational Outlook Handbook (Bulletin No. 1450) 1966-67 Edition. This publication represents an effort to define the modern American world of work as well as to provide a compendium of the nation's occupational opportunities. $5.00 per copy.

Occupational Outlook Quarterly. Published four times during each academic year, it presents the latest occupational outlook studies conducted by the U.S. Bureau of Labor Statistics. Annual subscriptions $1.25.

Sources of Occupational Information (Jerrold D. Hopfengardner, Ed.) 1966. 56 pages. Free in limited quantities to Ohio schools. $1.00 each for non-Ohio school users. Division of Guidance and Testing, Ohio Department of Education, 751 Northwest Boulevard, Columbus, Ohio 43212.

> This publication is designed to assist counselors, school librarians, and teachers of group guidance units or courses in locating appropriate up-to-date occupational and related educational information. Containing over three hundred entries, all references included have been published recently, contain general sources of information, and meet one or more of the following objectives: (1) present sources of available occupational information; (2) identify materials presenting occupational information for students, counselors, and others involved in educational services, and (3) describe techniques for gathering, organizing, and using occupational information.

CONSULTANTS

Inquiries regarding public technical education in Ohio can be directed to the following persons:

> James M. Furman, Executive Officer, Ohio Board of Regents, 88 East Broad Street, Columbus, Ohio 43215. (telephone 614-469-2575).
>
> D.R. Purkey, Supervisor of Technical Education, Division of Vocational Education, Ohio Department of Education, 612 State Departments Building, Columbus, Ohio 43215. (telephone 614-469-3430).

SOUND FILM STRIPS AND MOVIES

"Your Future Through Technical Education." 1965. List price: $7.60 record sound filmstrip; $ 5.20 tape sound filmstrip. Request school and quantity rates from: Instructional Materials Laboratory, The Ohio State University, 1885 Neil Avenue, Columbus, Ohio 43210.

> This color sound filmstrip is approximately 15 minutes in length and interprets the role of the technician as a paraprofessional, as well as the labor market demand for this specialist. It is directed at the high school student audience.

"Vocational and Technical Education for a Changing World of Work." 1966. List price: $10.40 record sound filmstrip; $15.20 tape sound filmstrip. Request school and quantity rates from: Instructional Materials Laboratory, The Ohio State University, 1885 Neil Avenue, Columbus, Ohio 43210.

> This color sound filmstrip is approximately 19 minutes in length and presents a broad view of the role of vocational and technical education. It is directed primarily at the adult lay audience.

"In a Medical Laboratory." 1967. Free loan from National Committee for Careers in Medical Technology, 1501 New Hampshire Avenue, N.W., Washington, D.C. 20036.

This 16 mm sound color movie is 28 minutes in length and explains the field of medical technology. Training requirements and major responsibilities for positions ranging from histologic technicians to pathologists are presented.

"Your Future Through Engineering Technology." (No. 156N). $14.95. Guidance Associates of Pleasantville, New York, Pleasantville, New York 10570.

This 15 minute color sound filmstrip presents a variety of technologist roles, discusses terminal and transfer programs of the technical institutes, explains entrance criteria, curriculum, and the Associate Degree.

ADDENDUM to Ohio Public Technical Education Notebook, 1967-1968. It is suggested this ADDENDUM be attached to your copy of Ohio Public Technical Education Notebook.

TRI-COUNTY TECHNICAL INSTITUTE

ADDRESS: Route 1
Nelsonville, Ohio 45764

ADMINISTRATOR: John J. Light

TELEPHONE: (614) 753-2791

TITLE: Director

DESCRIPTIVE INFORMATION

Classes will start: Fall 1968
Approved Housing: Private Rooms
Academic Calendar: Quarter System
Summer Job Placement Service? Yes
Graduate Placement Service? Yes
Co-op Programs? Yes
Suggested Time For Visitation: 8:00 a.m. to 4:00 p.m. Monday through Friday
Other Times by Appointment

ADMISSION REQUIREMENTS AND PROCEDURES

Entrance Requirements: High School Graduate or Equivalent
Tests Required For Counseling and Placement: SCAT
Personal Interview? Recommended
School Visitation Required? No
Suggested Date For Filing Application: During Senior Year
Deadline: September
Deadline For Filing High School Transcripts: Same as Application
Application Fee: $2.00
Deadline: With Application
Deadline For Initial Deposit: Day Before Classes Begin

CURRICULA

Accounting
Computer Programming
Electrical and Electronics
Executive Secretary
Food Service
Industrial Technology
Mechanical Technology
Mid-Management Retail
Hotel-Motel Management
*Forestry Technology
*Recreation and Wildlife Technology
**Industrial Ceramics Technology

*These programs are offered in Ohio only at Tri-County Technical Institute

**First Ceramic Technology Program in the United States

FINANCIAL INFORMATION

Tuition: $100 per Quarter
Tuition Plan Available: Yes
Sources of Financial Aid: Scholarships, Loans, and Employment

Enclosure with January/February, 1968 issue of "Ohio Guidance News & Views"
DIVISION OF GUIDANCE AND TESTING
State Department of Education
751 Northwest Boulevard, Columbus, Ohio 43212

Key to Programs

The following programs are offered by Ohio public technical institutions. This key is applicable in three sections of the data form for each school: (1) "RECOMMENDED HIGH SCHOOL COURSES" (e.g. "1: bookeeping" would be interpreted that bookkeeping is a recommended high school course for accounting majors); (2) "CURRICULA"; (3) "TYPICAL EMPLOYMENT OBTAINED BY 1966 GRADUATES" (e.g. "1: department stores" would be interpreted that numerous accounting majors obtained employment in department stores).

1. Accounting
2. Accounting, Pre
3. Aerospace
4. Agri-Business
5. Agri-Equipment
6. Architectural Drafting
7. Automotive Service
8. Building Construction
9. Business Data Processing
10. Business Management
11. Business Technology
12. Certified Lab Asst.
13. Chemical Research
14. Chemical Tech.
15. Child Care
16. Civil Engineering
17. Commerce
18. Commercial Art
19. Construction & Civil Surveying
20. Data Processing
21. Dental Hygiene
22. Electrical
23. Electronics
24. Engineering Graphics
25. Engineering Technology
26. Executive Secretarial
27. Fire
28. Food Processing
29. Food Service
30. General Business Mgmt.
31. Graphic Communications
32. Home Economics
33. Horticulture
34. Industrial
35. Industrial Laboratory
36. Industrial Mgmt.
37. Instrumentation & Control Systems
38. Law Enforcement
39. Legal Secretarial
40. Library
41. Manufacturing
42. Mechanical Design
43. Mechanical Tech.
44. Medical Assisting
45. Medical Secy.
46. Metallurgical
47. Mid-Management Rtlg.
48. Mortuary Science
49. Nursery School Assisting
50. Nursing, Registered
51. Office Administration
52. Printing
53. Retail Management
54. Retail Merchandising
55. Retail Mid-Mgmt.
56. Salesmanship
57. Sales Marketing
58. Science
59. Secretarial Science
60. Surgical Assisting
61. Transportation
62. Wholesale Mid-Mgmt.

VT 000 928
A Future for You in Teaching Vocational Agriculture.

American Vocational Association, Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
World in Color Productions, P.O. Box 392, Elmira, New York 14902 ($3.75).
Pub Date - 68 12p.

*AUDIOVISUAL AIDS; *AGRICULTURAL EDUCATION; *TEACHER RECRUITMENT; HIGH SCHOOL STUDENTS; *VOCATIONAL AGRICULTURE TEACHERS; *CAREER OPPORTUNITIES; VOCATIONAL COUNSELING; OCCUPATIONAL INFORMATION; TEACHING CONDITIONS; TEACHING BENEFITS

Developed by a committee of the American Vocational Association, the set of slides which accompanies this script may be used by teachers and counselors in informing high school students about vocational agriculture teaching. The slides were planned for use with junior and senior students in vocational agriculture classes but also are useful for presentations at civic clubs, parent and son banquets, and with freshman students in career exploration. Included in the set which can be ordered, some slide titles are: (1) That First Step, (2) Major Divisions of Agriculture, (3) Average Lifetime Incomes, (4) Vocational Agriculture Today, (5) Modern Facilities, (6) Teaching Agricultural Mechanics, (7) Landscaping, (8) Teacher and Farm Boy, (9) Foreign Agricultural Service, (10) What Does It Take to Teach, (11) FFA Officers, (12) Scholarship, (13) Combine Adjustment, (14) Your Advantages, (15) County Judging Contests, (16) Field Trips, (17) Adult and Young Farmer Work, (18) Related Agricultural Careers, (19) An Interesting Curriculum, (20) Your Advisor, and (21) Next Steps. (DM)

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A FUTURE FOR YOU IN TEACHING VOCATIONAL AGRICULTURE

VT000928

JAN 3 1 1968

A SCRIPT FOR A SLIDE SERIES
"A FUTURE FOR YOU IN TEACHING VOCATIONAL AGRICULTURE"

Suggestions to Teachers and Counselors

This set of slides has been developed as an aid to teachers, counselors and others in encouraging high school students to consider teaching vocational agriculture. Vo-ag teachers have a unique opportunity to strengthen their profession through the recruitment of some of their best students.

These slides have been planned, primarily, for use with junior and senior students in vocational agriculture classes; however, they might also be used for a variety of presentations such as at civic clubs, parent and son banquets and with freshman classes engaged in career exploration.

People are always more interested in seeing and hearing about those they know, so if local slides are available, they may help make the series more personal and meaningful. This script may be used while showing the slides, however, teachers and counselors should feel free to develop their own comments which may be more appropriate for specific audiences.

The set of slides was developed by the Professional Personnel Recruitment Committee of the Agricultural Education Division of The American Vocational Association. Three sets were distributed without cost to each state. Additional copies of the set. including the

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script, are available at their actual cost which is $3.75 per set, plus postage. These slides may be ordered from the World in Color Productions, P. O. Box 392, Elmira, New York 14902. Cash need not accompany orders, and payment may be made upon receipt of their invoice.

"A FUTURE FOR YOU IN TEACHING VOCATIONAL AGRICULTURE"

Slide 1 - "Title Slide"

This set of slides tells a part of the story of a career in teaching vocational agriculture--the opportunities and needs for teachers, the nature of the work, how you would fit into the picture, and how you might prepare for such a career.

As we view these slides, I hope that you will be thinking in terms of what you will be doing five or six years from now, and will be giving serious consideration to becoming a vo-ag teacher.

Slide 2 - "That First Step"

One of the most important decisions you will make during your lifetime is the selection of an occupation or a career. There is much wisdom in the old Chinese proverb "A Journey of 10,000 miles begins with a single step." You're about to start on such a journey involving thousands of miles and a life span of at least 40 productive years. It is important that this first step be in the right direction. Some of you may want to make this step toward teaching vocational agriculture.

Slide 3 - "The Major Divisions of Agriculture"

Agriculture is man's oldest and largest industry. The production of food and fiber assumes new importance at a time of unprecedented population growth in today's world.

Technological advances in American agriculture have created a demand for trained persons in the industry far beyond those needed a few years ago. Agricultural education is one of the most important divisions of agriculture. It serves as a unifying force in communicating new ideas, new methods, and new research to all segments of the agricultural industry.

"A FUTURE FOR YOU IN TEACHING VOCATIONAL AGRICULTURE"

Slide 4 - "Average Lifetime Incomes"

A good education is well worth its' extra effort and cost. Selling yourself short in education may represent only a personal loss now, but as you grow older and have a family, the lack of education can handicap your family as well.

As you can see, the average lifetime income of a college graduate is nearly double that of a high school graduate.

Slide 5 - "Vocational Agriculture Today"

All over the nation, vocational agriculture is growing, changing and improving. The next few slides will show some of these changes. At the same time, however, there is a serious shortage of teachers, a shortage which exists in more than 40 states at this time.

Slide 6 - "Modern Facilities"

Teaching is more productive and more satisfying in modern well-equipped facilities. Vocational agriculture classrooms, shops and laboratories are improving each year in most communities to keep pace with changes and improvements in the curriculum. This architect's sketch shows a new school which includes modern facilities for teaching vocational agriculture.

Slide 7 - "Teaching Agricultural Mechanics"

As a vocational agriculture teacher, you might work in a specialized program preparing students for jobs in the agricultural equipment field, as is the teacher shown in this picture. Other specialized programs now offered in some schools include preparation for jobs in agricultural supplies, processing agricultural products, forestry, agricultural resources, and ornamental horticulture.

"A FUTURE FOR YOU IN TEACHING VOCATIONAL AGRICULTURE"

Slide 8 - "Landscaping"

Another development in vocational agriculture is the teaching of ornamental horticulture. These students are learning some of the skills of landscaping as a part of their vocational horticulture program, and they are preparing for satisfying careers in this rapidly growing area.

Slide 9 - "In-Service Teacher Workshop"

This group of vocational agriculture teachers are participating in a summer workshop to learn new skills and to up-date their teaching in vocational agriculture. This is one of the means by which teachers keep up to date with fast-moving changes in agriculture.

New post-high-school programs for preparing agricultural technicians are another development in this field. Community colleges and technical institutes often select vocational agriculture teachers for such teaching assignments.

Slide 10 - "Teacher and Farm Boy"

Vocational agriculture teachers have a big responsibility for educating tomorrow's farmers. The farmer of tomorrow, operating a large specialized farm with a high capital investment, needs to be better educated than ever before. Over the nation more vocational agriculture students have farming or ranching as their goal than any other agricultural occupation. Today's teacher of vocational agriculture, therefore, must be well prepared in agronomy, in animal science, in agricultural mechanics and in farm business management and similar agricultural science.

Slide 11 - "Foreign Agricultural Service"

There are many opportunities in the developing countries for persons trained in agricultural education. Teaching vocational agriculture is often excellent preparation for subsequent foreign service.

"A FUTURE FOR YOU IN TEACHING VOCATIONAL AGRICULTURE"

Slide 12 - "What Does It Take to Teach"

Teaching vocational agriculture is a profession and the door is open to any young man who has an interest and the desire to complete his education and develop those qualities of leadership, character, and citizenship which are needed.

The next few slides will further illustrate some of the necessary characteristics of the teacher of vocational agriculture.

Slide 13 - "FFA Officers"

Leadership ability is necessary to success in teaching vocational agriculture. As the advisor to an FFA Chapter, the teacher seeks to develop leadership in each of the chapter members and especially in the officers. His understanding of the leader's role as well as the example he provides helps to accomplish this important task.

Slide 14 - "Scholarship"

The successful teacher enjoys the opportunity to learn, and is interested in continuing his education not only in college, but while he is on the job. He realizes that scholarship is essential to the success of the teacher.

Reading journals and magazines, as well as attending workshops and conventions, keep teachers up to date in the field of education as well as in agriculture.

"A FUTURE FOR YOU IN TEACHING VOCATIONAL AGRICULTURE"

Slide 15 - "Combine Adjustment"

Through your farm experience and your work in vocational agriculture, you now possess hundreds of experiences and skills which you can use as a vocational agriculture teacher. In this picture, a teacher, who is advising one of his students in adjusting a combine, is making use of the kind of experience which a successful teacher should possess.

Slide 16 - "Your Advantages"

The next few slides portray some of the advantages which you would enjoy as a vocational agriculture teacher. These advantages include working out of doors, having year-around employment, being engaged in interesting and challenging work, working at a variety of tasks, having opportunities in other related careers and receiving a good salary. You won't find this combination of advantages in very many careers.

Slide 17 - "County Judging Contest"

Some of our most important learning activities are conducted outside the classroom. Here is an example of a judging contest where agricultural skills and abilities are being gained by the students. Just as important as their ability to select a herd sire are some personal characteristics which these students are developing. Among these are resourcefulness, good sportsmanship, responsibility, honesty and initiative.

Slide 18 - "Field Trip"

As a teacher of vocational agriculture, you will enjoy your contacts with some of the leaders of the community in which you work. Here we see a teacher of vocational agriculture who is using the assistance of a local seed producer in teaching the importance of high quality seeds for efficient crop production.

Slide 19 - "Adult and Young Farmer Work"

About 2/3 of the teachers of vocational agriculture in the United States teach adults and young farmers as well as high school students. Much of this teaching takes place on farms and ranches. These teachers report this to be one of the most interesting and satisfying phases of their work. They find that working with these farmers adds to their proficiency in teaching high school classes and to their status in the community.

Slide 20 - "Home and Family"

An important advantage in teaching vocational agriculture comes to your family. Many jobs require you to be gone for days at a time, but this is not the case in vocational agriculture teaching. You are home with your family almost every night even though you attend many evening meetings. Some other jobs might require one to live in a large city, but as a teacher, you will have the opportunity to live and work in a rural area where the whole family can enjoy these benefits.

Slide 21 - "Related Agricultural Careers"

When you receive a college degree in agricultural education, you are prepared for many related educational careers in agriculture. Some graduates go directly into these jobs when they finish college, while other enter teaching immediately. Recent studies show that about 60% of the agricultural education graduates enter teaching immediately, and many of these go to other jobs after teaching for a few years.

Slide 22 - "Many Institutions Prepare Vo-Ag Teachers"

The location of colleges and universities that prepare vocational agriculture teachers is shown on this map. As you can see, the institutions

Slide 22 (Continued)

are numerous and they are situated throughout the nation. In addition to these, many agricultural education majors begin their work in community colleges or junior colleges and complete their work in one of these larger institutions. Notice that in our state we have ____ colleges and universities where you can major in agricultural education and prepare for teaching vocational agriculture.

Slide 23 - "An Interesting Curriculum"

The agricultural education curriculum is generally divided into four basic areas.

The technical agriculture area includes courses in animal science, agronomy, farm management and similar subjects.

The basic sciences are those which support the technical agriculture courses and would include chemistry, biology, and mathematics.

The general education portion of your curriculum provides you with an understanding of our culture and might include courses in literature, art and philosophy. The teacher education area of the curriculum prepares you for teaching and includes field experience when you would teach in a vo-ag department under the supervision of an experienced teacher.

Slide 24 - "Your Advisor"

Each college student is assigned a professor who advises him on his course work as well as his individual problems. You can look forward to an advisor who will become a guide and a friend. At the same time, you will be largely on your own, making your own decisions and preparing for professional responsibility.

"A FUTURE FOR YOU IN TEACHING VOCATIONAL AGRICULTURE"

Slide 25 - "Scholarships"

Some of you may need financial aid to attend college. The total expense for a year of college is getting higher every year. You can expect these costs to run from $1,400 to $1,600 at the present time. If you are interested in financial assistance, notice that there are many scholarships available. If you need a scholarship, you should contact the resident dean's office of the college or university you have selected.

Slide 26 - "Sheep Judging"

If you have enjoyed your agricultural courses in high school, you can look forward to your college courses. Here you will have an opportunity to study all areas of agriculture in greater depth and with the help of outstanding authorities.

Slide 27 - "Student Laboratory Work"

Today's students in agriculture work with sophisticated equipment as this student is doing in this laboratory. You will find that many college courses provide such laboratory experience.

Slide 28 - "Sports"

Recreation and sports play an important part in college life. While all of you will not participate in varsity sports, you will enjoy attending football, basketball and other events. In addition to varsity sports, you will enjoy the intramural programs which provide a wide variety of sports activities.

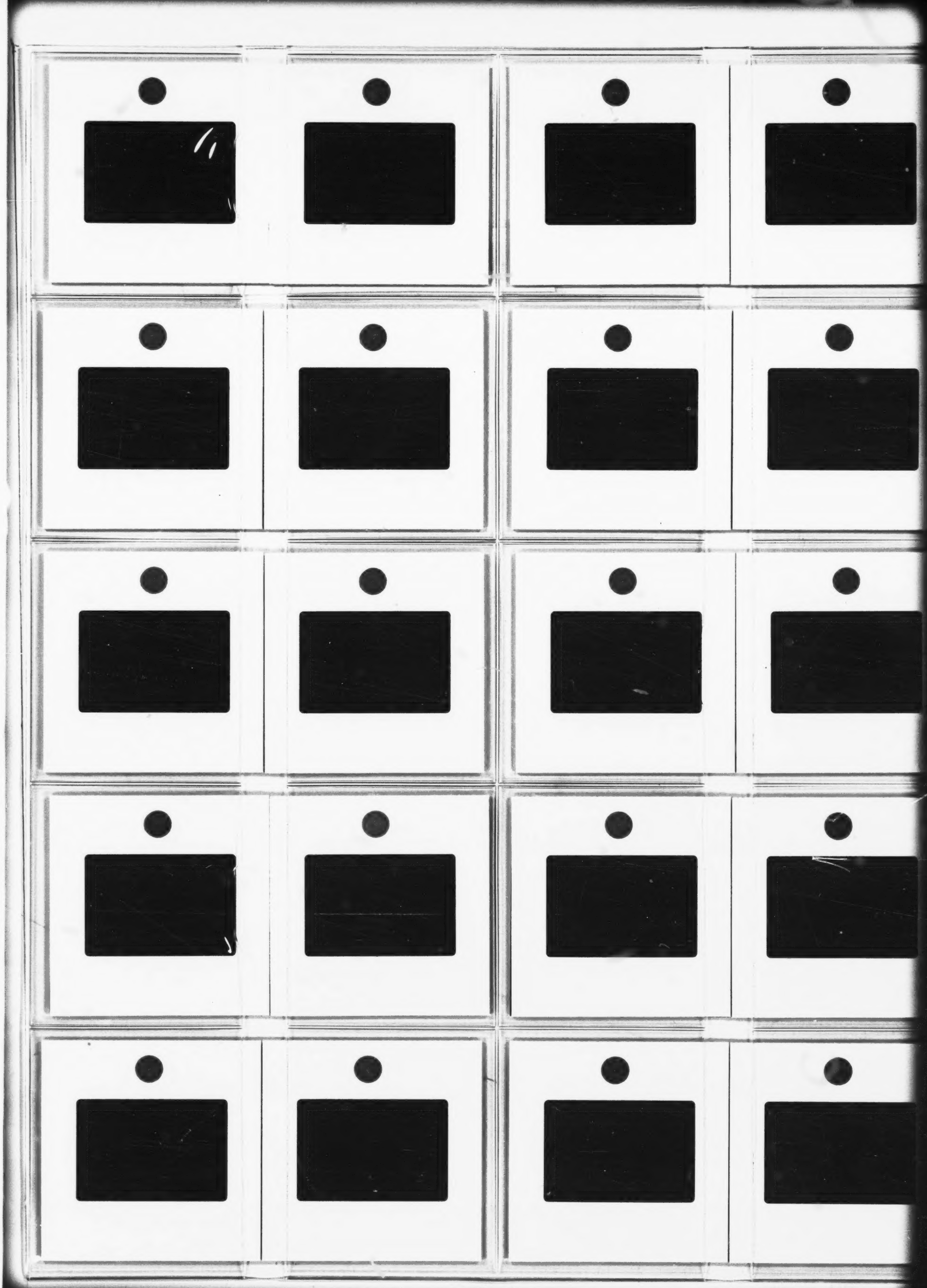
"A FUTURE FOR YOU IN TEACHING VOCATIONAL AGRICULTURE"

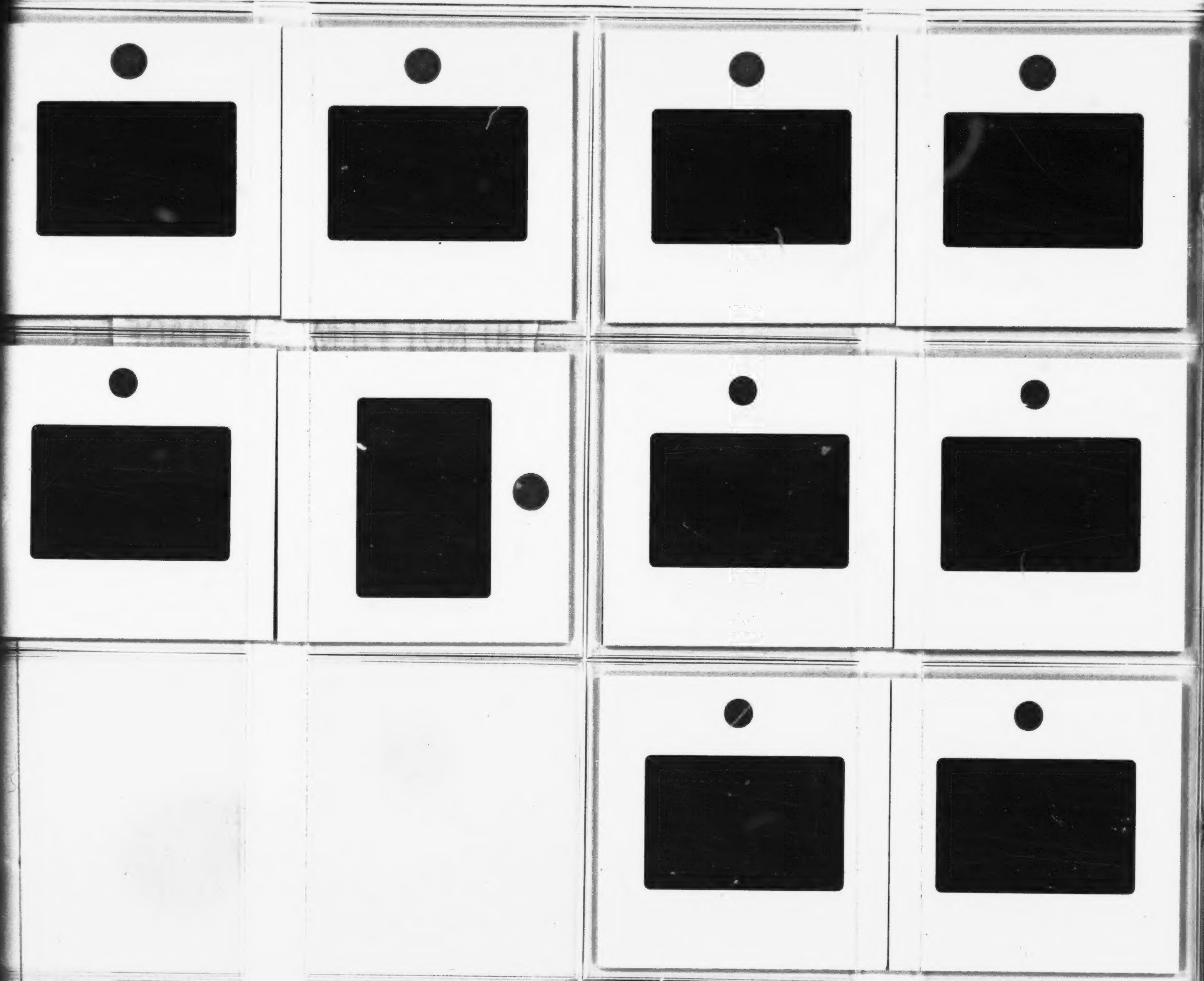
Slide 29 - "New Friends"

College is the place to expand your social horizons, to meet new friends, perhaps to find a wife. You will have occasion to make many friends at campus dances, parties, as well as in your classes.

Slide 30 - "Next Steps"

I hope that by now some of you are interested in looking further at teaching vocational agriculture. I would be glad to visit with you as well as your folks about the opportunities, the education and the other requirements necessary for this career. Thinking in terms of the steps shown on this slide, you need to select a university, to apply for admission; but most important, you must make up your mind that college is for you. Having done this, I am sure that you will find a way to accomplish your goal.





VT 001 442
Moed, Martin G.
Work Programs for Low-Income Youth: Some Operational Principles.

Columbia Univ., New York, N.Y. School of Social Work
Mobilization for Youth, Inc., New York, N.Y.
Training Institute, New York, N.Y.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 64 8p.; Paper prepared for the Training Institute Program on Urban Community Development Projects: Selected Aspects of the Mobilization for Youth Experience (April 27-May 1, 1964).

*DISADVANTAGED YOUTH; *YOUTH EMPLOYMENT; *WORK EXPERIENCE PROGRAMS; *INDIVIDUAL CHARACTERISTICS; PROGRAM IMPROVEMENT; ATTITUDES; PROGRAM DEVELOPMENT; *YOUTH PROBLEMS

This document is the independent observations and judgements of a professional practitioner associated with Mobilization For Youth, Inc. and deals with a number of poverty-linked characteristics that have become apparent through experience in this program. Some characteristics of youths that are directly related to a work program are: (1) inability to engage in long-range planning, (2) lack of work tolerance, poor work attitudes and difficulty in handling authority, (3) a disinclination to internalize personal problems, (4) extreme academic deficiency which results in deep alientation from school, (5) a long-standing suspiciousness of agencies, schools and authority, (6) continuous stresses and strains resulting from a number of social, legal, family and welfare problems, and (7) increased adolescent strains caused by the expectation of shouldering adult responsibilities. It is felt that a work program dealing with youth from a slum population must include counseling that is extensive in scope, a subsidized work program to allow for the growth of good work habits and attitudes, upgrading through on-the-job training, the possibility for formal trade school attendance, and placement through a number of intermediate jobs until the individual develops a pattern of job stability. Auxiliary services such as casework, education and psychological testing are also highly desirable. (MM)

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TRAINING INSTITUTE

Columbia University School of Social Work
Mobilization For Youth, Incorporated

WORK PROGRAMS FOR LOW-INCOME YOUTH: SOME OPERATIONAL PRINCIPLES.

by

Martin G. Moed

Prepared for the Training Institute Program on
URBAN COMMUNITY DEVELOPMENT PROJECTS: Selected
Aspects of the Mobilization for Youth Experience
APRIL 27-MAY 1, 1964

This paper is the work of a professional practitioner associated with MFY who, while drawing on MFY experience, has been free to express independent professional observations and judgments. The views expressed, therefore, do not necessarily express the views or state the policies of Mobilization for Youth.

The Training Institute is supported by a grant from the President's Committee on Youth Crime and Delinquency.

Published by
THE TRAINING INSTITUTE

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214 East Second Street • New York, New York 10009

VT001442

WORK PROGRAMS FOR LOW-INCOME YOUTH: SOME OPERATIONAL PRINCIPLES

by Martin G. Moed
Assistant Chief, Work Programs
Mobilization for Youth, Inc.

Through our first year and a half at Mobilization for Youth, a number of "poverty-linked characteristics" became apparent to us. Some of these characteristics directly related to a work program may be specified as follows:

(1) Inability to engage in long-range planning. Trainees do not respond to an approach that stresses admonitions such as "Study and work hard now and it will pay off later." Experience has already taught them that there is no going up from the so-called low-level entry job. They do not see it as the first step in acquiring work skills which will be used later on. Nevertheless, these youngsters tend to express high levels of aspiration - which they see no way to accomplish.

(2) Lack of work tolerance, poor work attitudes, and difficulty in handling authority. Clearly the provision of job opportunities is not enough. A large majority of the young people coming to the Job Center are unused to opportunity and unprepared to exploit it without first developing a certain state of readiness.

(3) A disinclination to internalize personal problems which are instead imputed almost exclusively to external forces. The trainee, as he sees it, is thrown out of school by somebody, the boss lets him go, the mistakes can always be traced to other people. His reaction to frustration is impulsive, rarely entailing an attempt to solve the

problem in a positive way. It is as though he is powerless to influence the outcome, which provokes him to respond in a very aggressive manner - or quickly to abandon the alleged source of his difficulty.

(4) Extreme academic deficiency which results in deep alienation from school. The so-called "pious" return-to-school objective will not be in the trainee's best interest and will only lead to more failure unless the school is ready to ameliorate some of the conditions that caused him to drop out. In other words, here as elsewhere, the program should not set middle class goals only to have them collide with lower class realities.

(5) A long-standing suspiciousness of agencies, schools, and authority. As a result, trainees require some manifestation of real concrete service before any type of trust can be generated. Youngsters come to the work program because they know we have jobs to offer. They do not come for counseling, guidance, or talk.

(6) Continuous stresses and strains resulting from a myraid of social, legal, family, and welfare problems. These stresses and strains often interfere with the ability to hold a job. A larger, more complex and pervasive environment persistently tugs at the individual.

(7) Increased adolescent strains. The sixteen year old who is out of school and out of work not only has to deal with the customary adolescent anxieties which impinge on all youth in our society, but also is expected to begin shouldering adult responsibilities in the face of a future which already looks hopeless. It is ironic that by contrast,

at 16, the middle class youngster is still considered a child. Programatically, we must find a way to teach the underprivileged adolescent how to work but not in an environment that forces him immediately and prematurely to carry out adult responsibilities.

I would like to make some other general observations, that have a direct bearing on the program.

1. Unskilled youngsters under the guidance of a skilled mechanic are capable of producing a great deal of work that has marvelous public value;
2. When youngsters deal with the common problems which confront them in a work situation, they are hardly ever involved in fights or other anti-social actions;
3. Youngsters who have had excellent work experiences in subsidized work still have difficulties holding outside jobs where they continue to need considerable counseling support;
4. There are many opportunities for up-grading through On-the-Job Training when part of the trainee's salary is paid to the employer by Mobilization for Youth;
5. Not unexpectedly, youngsters between 16 and 21 display a tremendous range of strengths and weakness. Programs, therefore, have to be comprehensive in nature; they must include a wide variety of services.

It is against this background that many of the Work Programs' operational principles have evolved.

The trainee's inability to engage in long range planning has affected our counseling method. Early in the program, counselors using a traditional approach were very frustrated when the trainee did not respond to the many opportunities offered. It soon became apparent, that in their eagerness to help the trainee achieve, the counselor was pushing him and, in effect, was substituting his own middle class values instead of considering the trainee's values. The counseling approach now in use is one of sharing and agreeing that the trainees have real difficulties which they will attempt to overcome together but without promises or magic. The process is understood to be a long one in which the person is helped to learn how to cope with problems they will encounter on the job. Each placement is seen as part of the process. A job turn-over is not necessarily interpreted as one more failure or counselor disappointment - but as a learning experience. As the young person begins to mature and to feel that he can influence his own destiny, the counselor begins to help him to consider long-range goals. This doesn't always mean an intensive relationship; it may simply imply that the trainee knows where to turn if he needs help while learning to help himself.

Increasing employability by improving attitudes and skills is actually a larger task than finding jobs. Over 65% of the youngsters coming to the Youth Job Center are not ready for employment. The major program established to meet this problem is the Urban Youth Work Corps. The Corps provides 175 employment opportunities in 10 different kinds of work performed by 17 different crews. They earn from $1.00 to $1.25 an hour for a maximum of 6 months. The youngsters work under crew leaders who have a business or industrial background. The work is made as meaningful as possible. For example, the Woodshop is set up as a furniture factory capable of quantity production. The Corps provides a work situation where youths learn to deal with problems of authority, difficulties in group relations, discipline in relation to time demands, boredom due to the monotony of work, frustration growing out of pressure for production, and other troubles that might prevent them from functioning adequately on a job.

As part of our subsidized work program both the counselor and the crew chief attempt:

1. To explain that subsidized work is only one step, that other counselors will help him after he leaves subsidized work for regular employment.
2. To help the trainee avoid impulsive reaction to problems and to find better solutions; one of the objectives in this connection is to encourage talk, a factor whose importance may be illustrated by one case: two trainees were working in a construction job when someone took the drop light from them, an action which signified to them that they didn't have to work until the light was returned.
3. To help trainees openly discuss mistakes before their peers, and to see that such mistakes are an inevitable part of learning.
4. To help trainees express ideas verbally and to ask when instructions are not understood.
5. To help the young people have a feeling of success by seeing to it that their work (for example, through distributing clothes to the needy) becomes highly visible.

Through such efforts the individual begins to feel that he has some power to deal with problems and also to gain satisfaction from the work.

We have learned that newly-acquired work habits and increased motivation are often very vulnerable; they may crumble before new difficulties encountered in a job away from Mobilization for Youth. There is real fear of new situations in an unfamiliar setting. The new supervisor is usually white; when he places demands on the trainee, the trainee is likely to see him as an authority figure from his past, whom he judged to be unfair. Learning a trade, or even accepting occupational responsibility or taking advantage of an opportunity requires a measure of dedication to which the trainee is not accustomed. Frequently, having a job causes an immediate change in family role, producing additional and frequently unwelcome burdens.

Acknowledgment of differences between the Work Corps and an outside job has led to a shift in program emphasis. Formerly two-thirds of the time and effort in counseling support were expended during the trainees' stay in the Urban Youth Work Corps. This procedure was based on a traditional assumption: that one could rely heavily on the carry-over of attitudes and behavior formed in subsidized work. The expected carry-over did not take place. It became apparent that supportive service was vitally needed for adjustment to a real job. Now two-thirds of the counseling staff time goes into helping the person find and hold a job, with only one-third allocated for the subsidized work experience. To facilitate this change, the Job Center is open two evenings a week when an average of 75 people are seen.

Literacy and arithmetic proficiency are an important part of employability. Our youngsters are quite capable of mastering academic skills related to an immediate objective such as getting a driver's licence or learning to add checks in the luncheonette. However, when they are encouraged to pursue remedial education on the ground that it will help them to "get better jobs," they are not greatly motivated to continue.

We have a voluntary remedial program after working hours - to which a small number of young people come. The poor attendance may be due to fatigue or the lacklustre quality of teaching materials, or perhaps it is mostly a product of deep alienation from learning. An experiment is now underway in the World of Education, to make academic instruction an integral part of this work. Efforts are being made to use materials directly related to the work they are doing.

In summary, a work program dealing with youth from a slum population must include: counseling that is extensive in scope; a subsidized work program to allow for the growth of good work habits and attitudes; up-grading through On-the-Job Training; the possibility for formal Trade School attendance; and placement through a number of intermediate jobs until the individual develops a pattern of job stability. None of this excludes auxiliary services such as casework, education, and psychological testing, which are also highly desirable.

VT 001 552
Simonds, Harry E.
A Report and Description of the Apprentice Education Program in Los Angeles Colleges and Adult Schools, 1965-66.

Los Angeles City Schools, Calif. Div. of College and Adult Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 66 48p.

*APPRENTICESHIPS; *ADMINISTRATOR GUIDES; *TRADE AND INDUSTRIAL EDUCATION; *PROGRAM DESCRIPTIONS; JUNIOR COLLEGES; HIGH SCHOOLS; ADULT VOCATIONAL EDUCATION; EDUCATIONAL ADMINISTRATION
LOS ANGELES

The purpose of this report is to provide basic information about major areas of apprentice education that concern school personnel. Topics presented are (1) personnel practices, (2) financial support, (3) apprenticeship and advisory committees, (4) equipment and supplies, (5) instructional materials, (6) programs of instruction, (7) government agencies, (8) manpower training problems, trends, and changes, and (9) administrative challenges. The appendix contains information about: (1) district staff appointment to committees, (2) committee meeting frequency, (3) number of classes, and (4) enrollment. (EM)

VT001 552

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in
LOS ANGELES COLLEGES AND ADULT SCHOOLS
1965-66

CRAFTSMANSHIP

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A REPORT AND DESCRIPTION OF THE APPRENTICE EDUCATION PROGRAM

in

LOS ANGELES COLLEGES AND ADULT SCHOOLS

1965-66

Submitted by:
Harry E. Simonds
Supervisor, Apprentice Education

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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LOS ANGELES CITY SCHOOLS
Division of College and Adult Education
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FOREWORD

Would you believe the program of Apprentice Education in which the Los Angeles City Schools is a creative partner is probably one of the best and most extensive in the world?

> You would if you knew that the fields of working, studying, and learning ranged from air conditioning-engineering through welding.
>
> You would if you knew the Los Angeles Unified School District in 1965-66 conducted 187 classes in Adult Schools for 4,655 enrollees.
>
> You would if you knew the Los Angeles City Junior College District conducted 259 college classes in 1965-66 for 5,988 enrollees.
>
> You would be grateful to the 158 advisory committees representing the cream of Southern California management and labor who averaged eight meetings each supporting forward-looking instruction.
>
> You would if you knew that apprentice trade representatives contributed to our schools, $87,013.54 in equipment to help the instruction programs go.
>
> You would be grateful to the Los Angeles City Board of Education, its Superintendent and Staff for these 446 apprentice programs and 10,643 eager apprentices.
>
> You would be glad to know the Los Angeles City Schools practices what it preaches, employing 56 apprentices in 12 different apprentice programs under school district auspices.

Read this report and I'm sure you'll join me in an expression of appreciation and commendation to Supervisor Harry E. Simonds, his nine apprentice specialists and all who work with them for making this important contribution to life in Southern California.

T. STANLEY WARBURTON
Associate Superintendent
College and Adult Education

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INTRODUCTION

In accordance with the provisions of the State of California law on apprenticeship, and the policies, rules, and regulations of the Los Angeles City School Districts, the colleges and adult schools of Los Angeles provide instruction in technical subjects that supplement the apprentice's daily on-the-job training.

The legal basis for apprenticeship on the national level is the Fitzgerald Act of 1937. In California the Shelley-Maloney Labor Standards Act of 1939 regulates formal apprentice training. The public schools' responsibility is set forth in the Shelley-Maloney Act, Section 3074 which provides that:

> "The preparation of trade analyses and outlines of instruction, and the administration and supervision of related and supplemental instruction for apprentices, coordination of instruction, with job experiences and the selection and training of teachers and coordinators for such instruction, shall be the responsibility of State and local boards responsible for vocational education."

Apprentice Education can be described as that part of the industrial education program that deals with long range formalized training for high skill level jobs.[1] It is a unique and unconventional type of educational program that involves extensive planning with, and the development of cooperative working relationships between educators, industry, and government leaders.

The rapidly changing and complex technologies of industry are requiring better trained workers. Formalized plans and methods of training are emerging in favor of the less formal training systems of past years. Unilateral on-the-job or institutional training will still suffice as preparation for many jobs. There is, however, in the high skill level jobs, an increasing demand for combining on-the-job training with supplemental instruction in technical subjects offered by the schools. The apprenticeship system of training exemplifies this concept in a formalized way. The program is well established and effectively organized, and is capable of combining the facility and training resources of industry, education, and government in developing skilled workers.

The report is assembled in three parts, the first part is a summary of the pertinent information and data presented in each chapter of the report; the second part of the report presents and discusses information and data on the apprentice training program under the chapter headings of the content page; the third or appendix part of the report presents statistical data on the apprentice program in the colleges and adult schools for the year of 1965-66 and certain data retroactive to 1950.

This report is not intended to cover the many facets of apprentice program operations, particularily as they pertain to industry and government responsibilities, nor even the details of school operations, rather, it is intended to provide basic information on certain major areas that concern school personnel. It is hoped that the information presented will give Board of Education members, general administrators, school administrators, counselors, and other interested school personnel greater insight into, and understanding of how the program is organized and how it operates, particularily within the schools.

[1] An apprenticable occupation is defined by California State Law as having not less than 2,000 hours (one year) of organized on-the-job training, supplemented by not less than 144 hours per year (except as otherwise provided by the schools) of school instruction in technical subjects related to the apprentice's on-the-job training. The average apprenticeship program is 8,000 hours or four years in length. The majority of apprentices are required to attend classes six hours per week, two nights per week during the duration of their apprenticeship training period.

SUMMARY

The following chapter summaries are intended to highlight the pertinent information and key points, that are presented in and further discussed in each chapter of this report.

I. The major responsibilities of administrators and supervisors are outlined for the purpose of clarifying and reviewing personnel practices, that pertain to the operation of apprentice classes in both the colleges and adult schools. Also, it is noted that most instructors for apprentice classes are recruited from industry to teach on a part-time basis, hence, they are not career teachers.

Through the Federal Vocational Education Acts, financial assistance is available under certain conditions to local school districts for the support of supervisory-administrative personnel holding valid vocational credentials. Current federal reimbursement support for such leadership jobs is approximately twenty-seven per cent.

Likewise, local school districts employing vocational instructors for apprentice classes, are eligible for vocational reimbursement money approximating seventeen per cent of the instructor's salary.

II. The various kinds of labor-management apprenticeship and advisory committees are described in the report on committees in the appendix of the report. The report shows that there are one hundred and fifty-eight committees of various types who held 1, 120 meetings concerning apprenticeship and related programs during the year of 1965-66.

It is noted that staff personnel in apprentice education serve as educational consultants to apprenticeship committees who hold on the average of 8.1 committee meetings each year. There is an average of 7.7 labor-management representatives serving on each committee. These committees sponsor apprentice training for seventy different skilled crafts. Only through the assistance of industry committees, can the schools keep their instructional programs in tune with the changing technologies of industry.

The guiding principle behind the industry-education partnership in training skilled workers is to let each, industry and education i.e., provide that part of the training to the worker that each is best qualified to provide by virtue of their special facilities, experience, and trained personnel.

III. Chapter III notes that the schools' major responsibility in apprentice training is to teach the technical subjects that are related to the apprentice's on-the-job training. However, it is recognized that there are exceptions to this rule. That in certain specialties of a trade, it is necessary that the schools provide manipulative skill training. This involves equipment, labs, and shops. Likewise, it is noted that special tools and equipment are needed to demonstrate the principles, methods, and techniques that are associated with the safe and effective use of such tools and equipment on the job.

Normally, the schools are not equipped to teach the aforementioned specialties, nor do they have funds for the purchase of such tools and equipment. Hence, members of the apprentice education staff have been instrumental in getting the cooperation of industry in furnishing the necessary tools and equipment on a long term loan or donation basis, that are necessary for teaching these special manipulative skills, concepts, etc.

During the school year of 1965-66 staff members arranged for the schools to receive donations and loans from industry, amounting to $87,013.54. Much of this equipment is used for instruction in other than apprentice classes.

IV. Good up-to-date instructional materials are acknowledged to be an indispensable tool for the part-time instructor of apprentice classes. Keeping these materials up-to-date and in tune with the rapidly changing technologies of industry, is noted as a never ending year-round responsibility.

The subject matter supervisor is the key person responsible for assuring that the curriculum is planned to provide the apprentice with a series of courses he can complete on a sequential learning basis, over an average four year period.

The several sources from which instructional materials may emanate are listed, noting that the local school district is the primary source, with the State Department of Education being the second largest contributor of such materials.

School policy and procedures for planning and developing instructional materials are outlined. Also noted is local district policy to search out the best materials available from whatever the source of emanation, and to use these materials in combination wherever they will contribute to an improved program of instruction.

V. Local Board of Education responsibilities for apprentice classes are outlined as provided for in the State Apprentice Law.

Chapter V notes that Los Angeles Colleges operate 56.26% of the apprentice classes in the Los Angeles districts, while the remaining 43.74% of apprentice classes are in the adult schools.

The legal and operating characteristics of an apprentice program are briefly discussed, noting the role played by education, industry, and government. Also, how the program is organized and operated within the school districts.

VI. Chapter VI takes note of the major agencies of government concerned with manpower training programs, particularly as they relate to formalized apprentice training and to other related industrial training programs. The interworking relationship of education, industry, and government are recognized, and the role of each is noted, as the role pertains to on-the-job training and institutional manpower training. The Manpower Development and Training Act of 1962 provides money for the promotion of on-the-job training, including apprenticeship and government subsidies to employers providing such training. Trends of this kind are noted as they involve the public schools with providing supplementary instruction.

VII. An analysis of manpower training problems, trends, and changes are noted as they pertain to apprentices and other industrial workers. The work of apprentice committees is recognized as having made notable progress in the refinement of their own committee operations, as well as pronounced improvements in administering their apprentice programs. Finally, note is made of some of the major areas of needs and problems in manpower training, that affect the cooperative working relationships of education, industry, and government.

VIII. Chapter VIII outlines in brief form, some of the challenges that face both the general administrator and the industrial educator, if the colleges and adult schools program of industrial education is to meet community needs in the years ahead. The challenges enumerated pertain, in the main part, to a point of view, a way of thinking, acting, and being sensitive to the unique problems of specialized educational programs.

I SCHOOL PERSONNEL

Administration and Supervision

General administrative responsibility for the Apprentice Education program, has been assigned to the Associate Superintendent, Division of College and Adult Education.

The Assistant Superintendent of Colleges and the Assistant Superintendent of the Adult Schools provide general administration for that portion of the program operating in the branches for which they are responsible.

Directly responsible to the Associate Superintendent, are one Supervisor and nine Specialists who are charged with the general and specific responsibility of cooperating with labor-management and government leaders in developing and operating apprentice education programs. Classes are operated in accordance with prevailing laws, rules, and regulations. Included among major Apprentice staff responsibilities are:

1. Provide a liaison link and coordination between colleges, adult schools and the leaders of the industrial community of Los Angeles.

2. Serve as educational consultants to Joint Apprenticeship Committees, organize educational and curriculum advisory committees, and utilize their services in the planning and operation of instructional programs for apprentices and related workers.

3. Plan, develop, and coordinate with industry advisory committees and school administrators the preparation and revision of instructional materials for use in colleges and adult schools where apprentice classes are conducted.

4. Recruit instructors from industry who are personally and technically qualified to teach the up-to-date changing technologies of industry. Orients instructors to their subject matter teaching assignment, and assists with their selection, credentialing, preparation, and in-service training.

5. Cooperate with college and adult school administrators in the planning, scheduling and operation of apprentice classes in individual schools, and coordinate the planning and scheduling of classes on a district-wide basis.

6. Promote and procure with industry assistance, specialized facilities, equipment and supplies needed for the instructional program, and not readily available through school sources.

7. Maintain central records necessary for scheduling and advancing apprentices in the program. Coordinate classroom instruction with the apprentices on-the-job training.

8. Work cooperatively with state and federal agencies of government concerned with manpower training programs, and who provide financial assistance, other aids and support for maintaining apprentice and other industrial training programs.

College and adult school administrators are responsible for:

1. Final selection and assignment of instructors to their schools.

2. Orientation of instructors to school policies, procedures and practices.

3. Direct supervision and control of instructors and students while in school.

4. Budget for teacher salaries, supplies and equipment.

5. Audio-visual aids, equipment, and other teaching machines available to the instructor. Also providing needed storage for instructor use.

6. Accept apprentice referrals from the apprentice education specialist, and enrollment of the apprentice in appropriate classes.

7. Provide general administrative services, maintain records, and provide general support for the classes.

8. Cooperating and coordinating school services with the District apprentice specialists and sponsoring industry committees and organizations.

Instructors

Instructors for apprentice and related trade-technical extension classes are in main, recruited from currently employed industry craftsman, who are technically and personally qualified to teach the skills of his craft.

The rapidly changing technologies of industry necessitate that those teaching craft skills be current with these changes.

The part-time evening instructor is unlike his full-time counterpart, in that teaching is supplemental to his career job. Thus, he requires more supervision and in-service training, more help in developing, acquiring, and using instructional materials than would a career teacher. School administrators and District supervisors must give special assistance to the part-time employed instructor.

Financial Support

Under the provisions of existing vocational education acts, the Los Angeles City School Districts may receive reimbursement money for the support of administration-supervisory personnel, who hold valid vocational teaching credentials and administration-supervisory credentials authorizing service in vocational-industrial education. Current support for such service positions is approximately twenty-seven per cent.

School districts operating classes in accordance with the provisions of the California Plan for Vocational Education, are also eligible for reimbursement for a portion of the vocational-apprentice instructors salary. Current reimbursement rates are approximately seventeen per cent of the instructor's salary.

II APPRENTICESHIP AND ADVISORY COMMITTEES

The 1965-66 annual statistical report on committees is a part of this report. It shows that members of the District Apprentice Education staff have established and are maintaining cooperative working relationships with a wide segment of Los Angeles industry (labor and management). Working relationships with apprenticeship and advisory committees, are maintained in accordance with the Apprenticeship Law, the California Plan for Vocational Education, and State and local school district policies, rules, and regulations. The following are definitions of the different kinds of committees described in the statistical report:

1. Joint Apprenticeship Committees are equally composed of labor-management representatives. They operate under the provisions of the State Apprenticeship Law, and are the legal controlling body for the training of apprentices in their trade or industry. The Committee also serves in an advisory capacity to the two parties providing the training, namely, the employers and the schools.

2. Eight of the apprenticeship committees named in the report are of the unilateral type composed of employer association members. They function similarly to the Joint Apprenticeship Committees.

   The remaining ninety-two of the one hundred apprenticeship committees are jointly composed of labor and management representatives.

3. Joint Training Committees are composed of labor and management representatives and normally give sponsorship and support to non-apprenticeship training programs. They usually operate under training standards similar to apprenticeship, but the training period is of much shorter duration than formal apprenticeship programs.

4. Area Coordinating Apprenticeship Committees is a system whereby several different area Joint Apprenticeship Committees meet periodically to exchange information of common concern to each. The development of uniform training standards, policies, procedures, and practices are typical of their function and purpose.

5. Many Joint Apprenticeship Committees have Education Sub-Committees who meet prior to the full committee meeting to handle and dispatch with operating details concerning the apprentice's education and training status in the program.

6. Curriculum Advisory Committees are convened by the school representative for the special purpose of advising and assisting the schools with the development and/or revision of course outlines and other instructional aids that will assist with starting new programs and/or improving on-going programs.

   Members are chosen upon the basis of their competency to advise on the kind of training needed to meet the payroll requirements of the job for which the student is being trained. Committees are temporary and are normally disbanded after their special work is completed.

7. Educational Advisory Committees are more commonly used to assist the schools with the general planning and maintenance of instructional programs, for either a particular occupation or for several occupations in an industry. Many such committees sponsor and support day time pre-employment programs designed to provide students with entrance employment skills while other committees concern their activities to the support of evening extension programs.

   These committees meet on the call of the school representative and do not normally meet more often than once or twice each year. Committees may be organized by college or adult school administrators in support of programs in individual schools, or committees may be organized to provide support for district-wide programs.

The attached statistical report on apprenticeship and advisory committees, which concern members of the Apprentice Education staff, indicate that there are one hundred fifty-eight committees of various types who held 1,120 meetings concerning apprenticeship or related occupations during the year of 1965-66.

Joint and unilateral apprenticeship committees hold on the average of 8.1 meetings each year. There is an average of 7.7 labor-management representatives serving on each of the one hundred apprenticeship committees.

Staff members attend advisory committee meetings, and along with various government agency representatives, attend nearly all apprenticeship committee meetings. Attendance is necessitated by legal and operational responsibilities to the program.

The foregoing figures on committee meetings held during the past year may suggest an excess of meetings. A partial answer may be found in an understanding of the organizational and operational structure of industry, and the complexities of planning, operating, and coordinating a long range skill training program for seventy different trade-technical programs, operating among several hundred employers.

It is only through the assistance of advisory committees that the schools can keep their instructional programs up to date and in tune with modern payroll job demands. The value of advisory committees will increase in proportion to the acceleration of technological changes which affect and necessitate changes in the instructional program.

The apprenticeship program specifically, and the industrial education program in general, dramatically exemplify how education, industry, and government do and can work together in planning manpower training programs. The guiding principle behind the plan of working together is cooperation to the end that education and industry will each assume responsibility for that part of the workers' training for which each is best qualified by virtue of their particular facilities, experience, and trained personnel.

III EQUIPMENT AND SUPPLIES

The schools' major responsibility in the apprentice training program, is to provide instruction in technical subjects (classroom work) related to the apprentices on-the-job training. This does not normally require equipment. Exceptions to this practice are:

1. Providing instruction in highly specialized manipulative skills that cannot normally be acquired on the job.

2. Using tools and equipment to demonstrate principles, methods, techniques, and safety.

Thus, equipment must be acquired for use in these specialized areas of apprentice training. A primary example is welding. Many of the apprentice program administrators require their apprentices to attend extra classes in welding for one or more semesters. Welding involves both classroom instruction and the use of equipment to teach skills. Another example is ornamental plastering, where there are few on-the-job training opportunities in this speciality. These special skills are needed for work in motion picture and TV studios, theaters, and elsewhere where ornamentation work is involved.

Members of the College and Adult School Apprentice Education staff have, where school funds are not available, succeeded in getting the cooperation of industry in furnishing, either through donation or long term loans, the necessary equipment and many of the consumable supplies necessary for carrying on an effective program of instruction in manipulative skills.

The following is a brief resumé of the direct contribution that industry has made to the instructional program during the school year of 1965-66.

Industry Donations and Loans

1. Automotive and Trucking Industry; engines, transmissions, and other vehicle components. Equipment service manuals.
   F. Peter DeFranco, Specialist
   Total Market Value $15,660.00

2. Electrical Industry; hand and power tools, consumable materials, books, and instructional materials.
   Walter N. Alerich, Specialist
   Total Market Value $ 1,000.00

3. Electronics Industry; testing equipment, radio and television sets, speakers, components, and consumable materials.
   Hugh L. Moore, Specialist
   Total Market Value $13,625.00

4. Painting, Decorating, and Floor Covering Industry; tools, consumable materials, and miscellaneous instructional aids.
   Earl C. Johnson, Specialist
   Total Market Value $27,064.00

5. Household Appliances and Barbering; washers, dryers, component parts, service manuals and other instructional aids, barber chair and supplies.
   Reginald Sundin Specialist
   Total Market Value $ 7,600.00

6. Ironworking Industry; new welding machines and component parts, storage lockers for teachers, measuring instruments, and audio-visual aids.
   Ralph R. Demmler, Specialist
   Total Market Value $10,541.54

7. Machine Tools Industry; instructional materials including, operational and maintenance manuals films, blueprints, textbooks, etc.
   Edwin M Thomsen, Specialist
   Total Market Value $ 2,148.00

8. Construction Industry; tools, projectors and films, consumable materials, etc. (Note: A portion of these materials were provided for use in day school classes.)
   William Woltjes, Specialist
   Total Market Value $ 2,148.00

9. Piping Industry; tools, consumable materials, instructional aids, etc.
   John Whyte, Specialist
   Total Market Value $ 7,300.00

Grand Total Contributions 1965-66 $87,013.54

In addition to the effort of promoting industry cooperation and contributions in support of the schools instructional program, apprentice staff members survey government surplus agencies for appropriate equipment and supplies that can also make contributions to the improvement of instruction. All such staff efforts are coordinated with and through the appropriate college and adult school administrators, where such equipment and supplies are to be utilized.

It should be noted, that the majority of equipment donated or loaned by industry for use in apprentice classes is also used to good advantage by day school pre-employment and evening extension classes. Thus, the day and evening schools can both benefit from these industry contributions.

IV INSTRUCTIONAL MATERIALS

Good up-to-date instructional materials are an indispensable tool for the instructor who is to do an effective job of teaching. Nearly all instructors of apprentice classes have been recruited from industry to teach the technical skills of their craft, and are employed on a part time basis by the school district. They have limited time for, and little experience with,developing and producing needed instructional materials. Thus, the primary and major responsibility for leadership in developing these materials rests with the supervisors of subject matter programs. The rapidly changing technologies of industry make it necessary that the developing, producing, and revising of instructional materials be a continuing year round responsibility This is particularly true in the skilled crafts where many of the new materials and processes either emanate or find initial application There are two basic areas of school responsibility in developing and keeping instructional materials current with payroll job needs:

1. Developing course outlines and materials for new programs where such materials are not already available.

2 Revising and refining instructional materials being used in current on going programs.

The average apprentice program is four years in length This means that the instructional program and curriculum for apprentices must be planned and organized to assure that subject matter classes will be scheduled and offered on a sequential learning basis over this period of time. This will normally involve sixteen different subject matter semester courses for each of the different apprentice programs.

There is currently more than seventy different trade technical apprentice programs that are active in the Los Angeles City School Districts. Of this number, approximately half of the programs are dependent upon local produced instructional materials. The remainder of programs utilize materials provided through sources such as:

1. The California State Department of Education

2. The International Labor Unions

3. Employer Associations and/or Companies

4. United States Office of Education and many state Departments of Education

5. Independent publishers.

Of the above listed sources, the major supplier of instructional materials for apprentice programs, is the California State Department of Education.

Members of the Los Angeles Apprentice Education staff and the representatives of the State Department of Education work in close cooperation in pooling their resources and efforts in developing and preparing instructional materials for use in apprentice classes. Materials produced by the State Department of Education are for use on a state-wide level. Hence, local school districts may often find it necessary to supplement these materials with local produced materials that are designed to cover topics unique to local conditions and jobs.

There is an increasing trend toward major labor unions having national apprenticeship programs to assume responsibility for developing instructional materials for use nationally. Likewise, a limited number of employer groups provide such materials. The United States Office of Education along with a few states offer a limited amount of instructional materials for apprentice programs. Publishers give major emphasis to the publishing of textbooks.

Local school district policy is to search out and use the best materials available, regardless of the materials' source of emanation. Often times materials from several different sources are combined to provide the local program with the best balanced program possible.

In the majority of cases, the development of instructional materials emanate at the local level, and later gravitate to the state and federal levels where greater resources are available for the further development and distribution of such materials.

The following procedure is normally followed by Apprentice Education personnel when developing curricula for new programs:

1. Survey known potential resources for information and materials that will aid and expedite curricula development. Utilize materials that are presently available and appropriate.

2. When appropriate materials are not available from other sources, organize a curriculum advisory committee composed of labor-management persons, representative of trade or technical occupations under consideration, and qualified to advise on the training and skills needed for the payroll job.

3. With the aid of advisory committees, analyze the skill requirements of the job, and separate the skills the apprentice is to learn on the job from the technical subject matter to be outlined as course content for school classes.

4. With the aid of instructors and/or hired professional experts, a portion of eight hundred hours of professional expert time is allocated yearly through the Instructional Services Division, for the employment of persons qualified to develop instructional materials for apprentice classes.

5. Cooperate with other educational institutions and/or agencies of government and private groups who can contribute to the improvement of instructional materials for use in local college and adult education classes.

The development and revision of instructional materials for use in apprentice-trade-technical classes is a never ending task which is dictated by the constant changing technologies of industry. New jobs are emerging, old jobs are changing. Skill requirements for the modern job are geared to these changes.

Los Angeles colleges and adult schools are operating the largest post-high school program of industrial education (apprentice-trade-technical) of any school district in the United States, and are serving the second largest industrial community complex in America.

Rapid program growth coupled with the acceleration of change, demand that improved instructional material services be provided for more than three hundred full-time teachers and nearly eight hundred part-time employed instructors of industrial subjects. In February 1966, a VEA-63 project proposal was submitted by the Supervisor of Apprentice Education to the Instructional Service Division, under Section 4, (c) of the Vocational Education Act of 1963, to study the possibility and need for establishing an "Instructional Materials Center" in the district. Such center to assist operating instructional personnel with keeping industrial education programs up-to-date and in tune with community needs.

Industrial Education personnel in the Division of College and Adult Education urge that the above described proposal be given serious consideration.

V. THE PROGRAM OF INSTRUCTION

Classes for state registered apprentices are jointly offered by the colleges and adult schools in the Los Angeles City School Districts. Registered apprentices are required to attend public school classes as a condition of their continued employment.

Section 3074 of the State Apprenticeship Law, sets forth the responsibilities of State and Local Boards responsible for vocational education. The Los Angeles City Board of Education is providing education services for registered apprentices in accordance with the provisions of the law, and in accordance with their own policies, rules, and regulations. Among major board responsibilities are:

1. The providing of administration, supervision and budget for maintaining related and supplemental instruction for apprentices.
2. Selecting, training, and employing classroom teachers and coordinators.
3. Developing and preparing instructional materials for apprentice classes.
4. Coordinating classroom instruction with the apprentices on-the-job training.
5. The scheduling and operation of apprentice classes in cooperation with industry apprentice committees.

Beginning in the year of 1946, the Los Angeles City Board of Education authorized the Superintendent of Schools to employ a staff of coordinators to work in cooperation with college and adult school adminstrators and industry representatives in planning and conducting instructional programs for apprentices. In the fall of 1947, budget was provided and assignments were made in the Junior College District for the employment of an Apprentice Education staff directed to report to the Associate Superintendent who heads what is now known as the Division of College and Adult Education. Major staff responsibilities and services are described in Chapter I of this report.

In the attached statistical report on Number of Apprentice Classes and Cumulative Enrollment for the year of 1965-66, it will be noted that 56.26% of apprentice classes are in the colleges, and 43.74% of the District's apprentice classes are in the adult schools. Apprentice classes are distributed among two colleges and fifteen adult schools. The year enrollment figure of apprentices in colleges and adult school classes amount to approximately twenty per cent of all registered apprentices in the State of California.

There are many different criteria which influence or determine whether apprentice classes will be attached to a college or adult school. Among major criteria are:

1. Geographic resident location of students in the district and/or their place of employment
2. Physical facilities available in a particular school
3. Budget availability
4. Fee charges that affect committee or student choices
5. School curriculum and class scheduling
6. Parking facilities
7. Preferences of industry (labor and management)
8. Particular school relations with industy
9. Favorable administrative policies of acceptance to apprentice classes
10. Registration policies and practices

The legal and operating characteristics of an apprentice program necessitate that education, industry, and government join together and pool their resources on a cooperative working basis, if such programs are to operate successfully. Federal and State agencies of government are legally responsible for fostering, promoting, and organizing apprentice programs. Employers are responsible for the on-the-job training of the apprentice. Public schools are responsible for providing the apprentice instruction in technical subjects related to his on the-job training.

Joint apprenticeship committees composed of labor-management representatives generally organize and operate their apprentice programs on an area or county-wide basis.

Thus the committees may sponsor classes to be located in several different school districts, or classes to be located within several different schools within a district. The latter is true in the Los Angeles City School Districts. It is the unique character of how apprentice programs are organized and operated and consequent industry demands for uniformity in the program, that necessitate that the programs operating in the Los Angeles colleges and adult schools be planned, organized, and generally adminstered on a district-wide basis. An example of the kind of problem necessitating this pattern of operation is the problem of providing in-service training for instructors recruited from industry and employed on a part time basis. Different instructors teach the same subject matter in several different schools in the district. In order to assure uniformity in instruction on a district-wide basis, curricula must be developed, and instructors must be trained to teach the specific subject matter of their assignment, as a basis for assuring that the apprentice can progress on a sequential learning basis regardless of the individual school he attends.

Whenever the number of apprentices in a particular trade permit, it is policy to separate apprentices by level of training, and schedule them into classes where all are in the same or approximate period of training. This system allows the instructor to emphasize the particular subject matter of his specialty. Otherwise, the instructor must prepare himself to teach a wide range of subject matter covering many levels of training to a mixed group of apprentices in the same class.

In addition to assisting school administrators with the supervision of classroom instruction, members of the District Apprentice Education staff organize and conduct institutes and workshops each year for instructors who teach the subject matter of each craft. This type of meeting allows supervisors and teachers to get right down to the basic problems of how to improve the instructional programs. Minutes and reports of these meetings are prepared and distributed as a means of improving communication and understanding. These meetings have produced outstanding results.

Evidence of the quality of instruction being provided apprentices in Los Angeles colleges and adult school classes is reflected in the fact that apprentices from Los Angeles classes consistently place in the top spots in competitive contests conducted for their trades on a local, state, and national level.

VI GOVERNMENTAL AGENCIES

Historically, industrial manpower training programs have developed through the joint cooperative efforts of education, industry, and government. Training programs such as apprenticeship are highly formalized and effectively organized. They are planned to systematically combine on-the-job training with schooling.

The majority of manpower training programs are of the informal type. The worker gets a job, and in turn develops the skills for the job through exposure to the work to be performed. The worker may, on a voluntary basis, attend evening school classes designed to improve his skills and potential for advancement.

Beginning with the passage of the Smith-Hughes Vocational Education Act of 1917 and similar subsequent acts, education has been given a legal and formal role to play in manpower training. Parallel to educational involvement has been the passage of legislation which involve other agencies of government. The Fitzgerald Act of 1937 involve the United States Department of Labor in the promotion and organization of apprenticeship programs. In 1939, the California Legislature passed the Shelley-Maloney Labor Standards Act (California Apprenticeship Law) which mandated the State Department of Industrial Relations to foster, promote, and assist industry with the organization of apprenticeship programs. Since passage of these basic apprenticeship laws, amendments have been made to authorize these agencies of government to extend similar government services to industry in areas other than apprenticeship training. Such programs may involve unilateral on-the-job training or may provide for supplementary schooling.

The above explanation is by way of indicating the government's role in apprenticeship, and to explain how and why the Apprentice Education staff of the schools must develop and maintain inter-working relationships with government agencies, as well as with labor-management groups concerned not only with apprenticeship programs, but also other related training programs. Increasingly during the past year, federal and state agencies of government have employed additional people to promote on-the-job training, under the provisions of the Manpower Development and Training Act of 1962.

Originally, the MDTA gave emphasis to institutional training and on-the-job training other than formal apprentice training. Recent emphasis by government seems to be on the promotion of apprenticeship by providing the employer government subsidies through MDTA for the first year of the apprentice's on-the-job training. Automatically the schools must provide instructional programs for government registered apprentices. School attendance is not optional for apprentices, it is compulsory.

Not only are the aforementioned agencies of government giving increasing effort to the promotion of apprenticeship through use of MDTA money, but they are also promoting training under the provisions of what is known as Section 3093 of the Labor Standards Act, 1939. Programs promoted and organized under this section are normally formalized by a state and industry "Training Standards" agreement. Such training is for the non-apprenticable occupations. (An apprenticable occupation must, by law, involve not less than two thousand hours of organized systematic training.)

The schools' Division staff in Apprentice Education cooperates with governmental agencies and the industry training committees that are set up to administer these programs. School responsibilities are similar to those in apprenticeship. Staff members also maintain working relationships with the California State Employment Service on matters of counseling, testing, and making job referrals, etc.

Current legislation coupled with trends in manpower training would indicate that government agencies in cooperation with labor and employer organizations will, in future years, give more attention to the promotion of training programs that will formally link on-the-job training with school instruction. Individual employers will of necessity have to provide the on-the-job training. Public vocational education will in most cases provide supplementary instruction in technical subjects related to the payroll job.

The Apprentice Education staff will, because of their established contacts and working relationships with industry and government groups, be in a key position to provide a liaison link between the industrial community of Los Angeles and the colleges and adult schools concerned with the aforementioned type of programs.

VII TRENDS AND CHANGES AFFECTING THE TRAINING OF APPRENTICES AND OTHER INDUSTRIAL WORKERS

Apprentice Education in the Schools

1. Better students are entering classes as a result of improved systems for selecting apprentices.

2. Schools with the help of committees are constantly striving for improvement in the effort of recruiting and selecting instructors highly qualified in both the technical and personal qualities essential for good teaching.

3. Improved programs of teacher education and in-service training for apprentice instructors is evident throughout the school districts of the State.

4. There is an increasing effort on the part of industry, particularly with organized labor, to develop instructional materials for their trades on a national basis. Likewise, the U. S. Office of Education and many state departments of education are following the trend on national and state levels. The result is greater uniformity in and availability of instructional materials for use in apprentice classes.

5. The development and refinement of instructional materials used in California public school apprentice classes are the best to be found anywhere in the nation The work of revising and improving these materials in keeping with technological ch[illegible] is an on-going, constant and never ending responsibility.

6. There is an increasing demand on today's skilled workers for additional knowledge of technical subjects related to the payroll job. As new materials and processes are developed and technology changes, these changes must be, and are, incorporated into the program of classroom instruction for apprentices.

7. The schools are, whenever requested and possible, providing testing and selection services to apprenticeship committees desiring to improve their system of selecting apprentices.

Apprenticeship Committees

1. An increasing number of Joint Apprenticeship Committees are improving their organizational and operational structure for more effective administration of their program. This results from their tenure of experience and maturity in refining policies, procedures, and practices, such as:

    (a) The development and improvement of the system for selecting apprentices.

    (b) Their willingness to enforce and maintain Apprenticeship Standards.

    (c) Disciplining of apprentices where such discipline is reasonable and in the best interest of the apprentice and the program.

    (d) Apprentice completion programs designed to gain recognition, acceptance, and prestige for the program.

    (e) Gaining the acceptance and support of employers and employees in providing opportunities for employment and on the-job training.

2. A greater number of Joint Apprenticeship Committees are recognizing that certain specialized areas of manipulative training cannot be acquired on the job, and are in turn assisting the schools with the procurement of materials and equipment that are needed for facilitating such instruction in the schools.

3. An increasing number of Joint Apprenticeship Committees are providing leadership for the negotiation of contracts between labor and management on the subject of Training Trust Fund monies for the improvement of training and the administration of the program.

4. More Joint Apprenticeship Committees are giving attention to the training and re-training of journeymen and other workers in the trade, as well as to the improvement of apprentice training.

5. Joint Apprenticeship Committees and the State Division of Apprenticeship Standards are giving increasing attention to the necessity for requiring valid documentation of satisfactory completion of the apprentices on-the-job and school training, as a basis for issuing the "Trade Completion Certificate".

Looking Ahead in Apprenticeship

1. The problem of knowing when the introduction of new materials and processes into a trade has reached a point, when breadth training becomes so far reaching, that depth training is no longer possible. Therefore, the problem is to know when and how to classify skills and technical knowledge into cluster areas that will still maintain a proper balance between adequate depth training and reasonable breadth training. The idea of balance is to check the tendency and attempt of apprentice committees to keep adding to an already crowded training program, new materials and skills to be learned by the apprentice. If a limit is not placed on this practice, it can spread the training activities so thin that he cannot receive depth training in any major area or cluster of skills in his trade that would justify the classification, skilled journeyman artisan.

2. As new materials and processes are developed and introduced into the trades, and as new job classifications emerge, there will likely be problems or conflicts of union jurisdiction over this new work. Public school representatives responsible for planning training programs covering new work will be that of avoiding involvement with union and/or management problems of jurisdiction, and the duplication of their efforts in working with multiple groups on the same type of training program.

3. With the strong trend toward specialization in industry, there will be a continuing problem in getting industry to rotate apprentices through a varied and wide range of work experiences as provided in apprenticeship agreements. The Joint Apprenticeship Committees will need to give increasing attention to the proper rotation of apprentices.

4. There is increasing pressure and support from labor departments of government (State and National) for legislation or policies which will provide direct and continuing government subsidies to apprentices and/or employers, or in lieu thereof, a tax rebate to employers as a stimulus for employing apprentices and for gaining a broader acceptance of the apprenticeship system for training skilled workers.

5. As apprenticeship programs improve and expand, there will be increasing need for teamwork and cooperation among government, education, and labor-management groups.

6. There will be increasing need for cooperation and the pooling of resources between education, government, and industry groups in the area of research, surveys, and the gathering of data necessary for the planning of apprentice training programs.

7. Trends suggest that there will be increasing financial support from industry and government for apprenticeship training.

8. Joint Apprenticeship Committees and industry groups will be hiring industry training coordinators to provide liaison between their committees, employers, schools, and government.

General training for industry

As payroll job requirements change, and the skill level for jobs advance, there will be increasing demands for industrial educational services from the public schools. The following are seen on the horizon:

1. There will be more formalized training required for all industrial workers in the foreseeable future.
2. There will be a higher level of skill training required for the payroll jobs of the future.
3. Greater emphasis will be given to depth training in concentrated and highly specialized areas of work.
4. There will be greater involvement of both governmental agencies and labor and management representatives in the planning, development, and administration of industrial training programs.
5. In many of the higher skill level classifications, there is increasing support for the planning of programs that will combine on-the-job work experience with schooling (other than apprenticeship).
6. There is increasing financial support for industrial training programs from both government and industry. Recent legislation such as the 1963 Vocational Education Act and the Manpower Development and Training Act of 1962, reflects government interest, while industry is reflecting its interest through negotiation of Training Trust Fund Monies to be used for training purposes.
7. There will be increasing need for the pooling and coordination of the research efforts of government, education, and industry if current labor market needs are to be identified. Such research must reflect the changing technologies of industry and the training needed for available jobs into the schools industrial training programs.
8. School personnel will have to give increasing attention to long-range planning as a basis for setting goals on program development and facilities and equipment procurement for the schools. A master plan should be developed providing for the orderly and systematic planning and development of specialized shop and laboratory facilities within select geographic areas of the school districts.

9. Schools will need to consolidate, organize, and coordinate their efforts as never before, if they are to meet the training needs of thousands of youth entering the labor market, and are to assist industry with the training, and re-training of skilled manpower for the years ahead. If the public schools do not accept this challenge and responsibility, other agencies of government and private enterprize using public tax money will.

10. Teacher and leadership training programs will need to be improved and expanded. Industrial educators will need and receive more training in the art of public relations and the mass communications media. The educator will need additional training in the science of planning and developing training programs in cooperation with government agencies and industry groups. Such programs must be realistically geared to the needs of youth and the available payroll jobs.

11. Greater effort will be given to the coordination of group and individual efforts in planning and developing improved instructional materials. The local, state, and national efforts of education must be more effectively coordinated within as well as with the work of industry. Research information must be combined with the contributions of Curriculum Advisory Committees, if instructional materials are to be kept current with the needs.

12. Vocational Guidance programs must be improved, expanded, and available to all students. Improved occupational information must be made available to guidance personnel. All teachers of occupational training programs will need training as teacher-counselors.

VIII. HOW CAN EDUCATORS STRENGTHEN AND IMPROVE PUBLIC SCHOOL VOCATIONAL-INDUSTRIAL EDUCATION SERVICE?

The challenge for industrial educators is to find ways and means for:

1. Improving and expanding the schools industrial training services to meet the needs of citizens and an industrial community.
2. Developing labor market research data necessary for planning functional training programs.
3. Improving, developing, and revising instructional materials in tempo with changing technologies and instructor needs.
4. Locating specialized instructional facilities and equipment in geographic areas of the school districts best suited for the full utilization of such facilities.
5. Involving greater numbers of key labor, management, and government leaders in the planning and operation of industrial education programs.
6. Developing administrative policies and practices that will allow for the necessary flexibility needed for planning, scheduling, and operating industrial classes and programs.
7. Acquiring the financial aids and assistance of both government and industry in procuring needed facilities, equipment, and supplies.
8. Determining which portion of the industrial worker's training can be most efficiently and effectively given by industry, and which part by the schools.
9. Staffing and operating industrial education programs in a way that will assure the most efficient and effective service possible from both the individual schools and the district offices.
10. Maintain contacts with, and keep informed on the thinking of industry and government groups concerned with industrial training programs, and the policy and political proposals of such groups.
11. Plan and develop training programs that will train persons for profitable employment, in the shortest time possible.
12. Develop and improve the two way line system of communicating with all parties concerned with the planning of industrial training programs.

The Challenge for the General Administrator is to:

1. Appreciate and understand that specialized occupational training programs cannot effectively operate in the same conventional pattern applicable to general education programs.

2. Actively support the practice of staffing specialized training programs with persons specially trained and qualified for such service.

3. Give active and direct support to those charged with the responsibility for improving and expanding industrial education services. Help build the status of the program among general educators and community leaders.

4. Support the advisory committee concept, and the merits of involving occupational and industry representation with the planning and maintenance of industrial education programs.

5. Provide research services that will help to identify labor market needs, and consequent training needed for available industrial jobs.

6. Provide for the development of a Master Plan, which will allow for the orderly and systematic development of specialized industrial education facilities on a district-wide, long range basis.

7. Provide for administrative policies and practices, that will allow for the flexibility needed to plan and operate vocational-industrial classes which are realistically geared to current payroll needs.

8. Provide leadership for acquiring all available finances possible for the support of industrial education. Search for improved techniques in relating financial and community resources to program needs.

9. Provide for effective two-way communications with those charged with program planning and operation. Refine personnel organization and management plans wherever possible, to assure that each staff member is utilized in the most efficient and effective way possible.

APPENDIX

LOS ANGELES CITY SCHOOLS
Division of College and Adult Education
Apprentice Education Office

ANNUAL REPORT --- 1965-66

STAFF ASSIGNMENTS

JOINT APPRENTICESHIP AND EDUCATIONAL ADVISORY COMMITTEES

Members of the Apprentice Education Staff, Division of College and Adult Education, serve as educational consultants to the lay advisory and apprenticeship committees listed in this report. Their assignments have been authorized by the Los Angeles City Board of Education, and approved and made through the Superintendent of Schools.

Division staff assignments are made for the purpose of meeting local school responsibilities provided in existing laws, policies, rules and regulations, such as:

1. Annual agreement between the State Bureau of Industrial Education and the Los Angeles City School Districts which provides vocational reimbursement money for support of supervision and instruction costs in industrial education programs.

2. The Apprenticeship Law in California, Chapter 4, of Division 3 of the Shelley-Maloney Apprentice Labor Standards Act of 1939, Sections 3074, 3078, and 3093.

3. The Manpower Development and Training Act of 1962 as amended, and relates to supplementary instruction for on-the-job trainees in industrial occupations.

4. Los Angeles City Board of Education, and administrative policies, that pertain to vocational education services provided by the colleges and adult schools.

LOS ANGELES CITY SCHOOLS
Division of College and Adult Education
Apprentice Education Office

1965-66

SUMMARY REPORT OF DISTRICT STAFF ASSIGNMENTS to JOINT APPRENTICESHIP AND EDUCATIONAL ADVISORY COMMITTEES

Type of Committees	JAC	JTC	UAC	EAC	CAC	JAC-ESC	ACAC	TOTAL
Supervisor:								
Harry E. Simonds	3			3				6
Specialists:								
Walter N. Alerich	18	1		1			1	21
F. Peter DeFranco	9		1	3		2	1	16
Ralph R. Demmler	8		1	7	1	3	1	21
Earl C. Johnson	7			3			1	11
Hugh L. Moore	6		1	6			1	14
Reg E. Sundin	9	1	1	4		1	1	17
Edwin M. Thomsen	11	1	4	4	1			21
John W. Whyte	12			3				15
William Woltjes	9			3	1	1	2	16
TOTAL COMMITTEES	92	3	8	37	3	7	8	158

CODE -- TYPE OF COMMITTEES

JAC - Joint Apprenticeship Committee
JTC - Joint Training Committee
UAC - Unilateral Apprenticeship Committee
EAC - Educational Advisory Committee
CAC - Curriculum Advisory Committee
ACAC - Area Coordinating Apprenticeship Committee
JAC-ESC - Joint Apprenticeship Committee Education Sub Committee

LOS ANGELES CITY SCHOOLS
Division of College and Adult Education
Apprentice Education Office

ANNUAL REPORT -- 1965-66

STAFF ASSIGNMENTS: JOINT APPRENTICESHIP AND EDUCATIONAL ADVISORY COMMITTEES

HARRY E. SIMONDS Supervisor	TYPE OF COMMITTEE	NO. OF MEETINGS DURING YEAR
Los Angeles County Joint Apprenticeship Board (Los Angeles County)	JAC	2
Los Angeles City Joint Apprenticeship Committee (City of Los Angeles)	JAC	0
Los Angeles City School Districts Joint Apprenticeship Committee	JAC	2
Los Angeles Trade-Technical College Advisory Committees (3 committees)	EAC	3
Ex-Officio (see following listings)	(152 comm.)	1,113
	Total committees = 156	Total meetings = 1,120

CODE -- TYPE OF COMMITTEES

JAC - Joint Apprenticeship Committee
JTC - Joint Training Committee
UAC - Unilateral Apprenticeship Committee
EAC - Educational Advisory Committee
CAC - Curriculum Advisory Committee
ACAC - Area Coordinating Apprenticeship Committee
JAC-ESC - Joint Apprenticeship Committee-Educational Sub-Committee

LOS ANGELES CITY SCHOOLS
Division of College and Adult Education
Apprentice Education Office

ANNUAL REPORT -- 1965-66

STAFF ASSIGNMENTS: JOINT APPRENTICESHIP AND EDUCATIONAL ADVISORY COMMITTEES

WALTER N. ALERICH Specialist (21 committees)	COMMITTEE NUMBER	TYPE	NO. OF MEETINGS DURING YR.
Electrical (L. A. County Civil Service)	2A1-10	JAC	3
Electrical Lineman (Water and Power)	2A1-3	JAC	10
Electrical Repairman (Water and Power)	2A1-14	JAC	4
Electrical Mechanic (Water and Power)	2A1-7	JAC	8
Electrical Cable Splicer	2A1-13	JAC	10
Electrical Maintenance (L. A. Area)	2A1-5	JAC	10
Electrical Maintenance		ACAC	4
Electrical Maintenance (Firestone Tire and Rubber Co.)	2A1-12	JAC	2
Electrical Sign and Luminous Tube	2A1-6	JAC	10
Electrical Wireman (L. A. County - 6 districts)	2A1-9	JAC	2
Electrical Wireman (L. A. Met. Area - Dist. 1)	2A1-1	JAC	12
Electrical Wireman (Long Beach Area - Dist. 2)		JAC	1
Electrical Wireman (Santa Monica Area - Dist. 3)		JAC	1
Electrical Wireman (San Fernando Valley-Burbank Area - Dist. 4)	2A1-2	JAC	11
Electrical Wireman (Pasadena Area - Dist. 5)		JAC	1
Electrical Wireman (Montebello Area - Dist. 6)		JAC	2
Electrical Construction & Maintenance (L. A. Trade-Tech. College)		EAC	1
Electrician-Electronics (L. A. City Schools)	2A1-8	JAC	5
Electrician-Motion Picture and Television Studio	2A1-11	JAC	11
Tilesetters	4A5-1	JAC	10
Tilesetters (MDTA)		JTC	10
			128

Joint Apprenticeship and Educational Advisory Committees - 1965-66

F. PETER DE FRANCO Specialist (16 committees)	COMMITTEE NUMBER	TYPE	NO. OF MEETINGS DURING YR.
Auto Truck Mechanics (Southern Calif. Trans. J.A.C.)	11A2-1	JAC	11
Automotive and Construction Equipment Repair Trades (Dept. of Water and Power)	11A2-3	JAC	2
Automotive Mechanics (L.A. Trade-Tech. College)		EAC	1
Automotive Mechanics - Independent Garage Owners of Calif., Inc.	11A2-4	UAC	12
Automotive Mechanics - L.A. County Shops Apprenticeship Council (includes Body and Fenderman, Motorcycle Mechanic, Machinist, etc.)	11A2-6	JAC	2
Bricklayers (L.A. Area)	4A1-1	JAC	11
Bricklayers (L.A. Trade-Tech. College)		EAC	1
Cement Masons (San Fernando Valley)	4A2-1	JAC	12
Cement Masons - Los Angeles County (Jurisdiction)	4A2-2	JAC	12
Die Sinkers (L.A. Area)	4A1-14	JAC	9
Heavy Duty Truck and Diesel (L.A. Trade-Tech. College)		EAC	1
Millwrights (L.A. Area)	5A7-1	JAC	11
Operating Engineers - Construction (Southern California)	11A6-1	JAC	12
Operating Engineers - Construction		JAC-ESC	4
Surveyors (Southern California)	13A3-1	ACAC	12
Surveyors (Sub J.A.C.)	13A3-2	JAC-ESC	10
			123

Joint Apprenticeship and Educational Advisory Committees - 1965-66

RALPH R. DEMMLER Specialist (21 committeess)	COMMITTEE NUMBER	TYPE	NO. OF MEETINGS DURING YR.
Boilermakers (Southern California)		JAC	1
Ironworkers - Reinforcing (Southern California)	5A5-1	JAC	8
Ironworkers - Structural (Southern California)	5A5-2	JAC	19
Ironworkers - Structural (Southern California ESC)		JAC-ESC	15
Ironworkers - Structural Steel Fabricating	5A5-3	JAC	17
Ironworkers - Structural Steel Fabricating		UAC	4
Ironworkers - Structural (L. A. Trade-Tech. College)		CAC	3
Ironworkers - Architectural and Ornamental	5A5-4	JAC-ESC	21
Ironworkers (Statewide)		ACAC	2
Plastics		EAC	5
Refrigeration and Air Conditioning (L.A. Trade-Tech. College)		EAC	3
Sheet Metal (L. A. Area)	5A2-1	JAC	19
Sheet Metal (L. A. Area ESC)		JAC-ESC	51
Sheet Metal (L. A. Trade-Tech. College)		EAC	8
Sheet Metal (L. A. County Schools)		EAC	4
Sheet Metal (L. A. County Civil Service)	5A2-2	JAC	6
Sheet Metal (L. A. City Schools)	5A2-3	JAC	5
Shipfitting (Todd Shipyards)		EAC	9
Welding (L. A. Trade-Tech. College)		EAC	8
Welding (Dept. of Water and Power, Los Angeles)	5A3-1	JAC	14
Welding (Todd Shipyards)		EAC	3
			225

Joint Apprenticeship and Educational Advisory Committees - 1965-66

EARL C. JOHNSON Specialist (11 committees)	COMMITTEE NUMBER	TYPE	NO. OF MEETINGS DURING YR.
Baking (Hebrew)	9A3-1	JAC	12
Floor Covering (L. A. Area)	6A4-1	JAC	28
Painting and Decorating (Coordinating Council)		ACAC	12
Painting and Decorating (L. A. Area)	6A1-1	JAC	14
Painting and Decorating (San Fernando Valley)	6A1-2	JAC	13
Painting and Decorating (L. A. Trade-Tech. College)		EAC	1
Painting and Decorating (County Civil Service)	6A1-3	JAC	2
Painting and Decorating and Glazing (L. A. City Schools)	6A1-4	JAC	2
Painting - Glaziers (L. A. Area)	6A5-1	JAC	13
Painting - Signs (L. A. Trade-Tech. College)		EAC	1
Model Home Committee (L. A. Trade-Tech. College)		EAC	6
			104

HUGH L. MOORE Specialist (14 committees)			
Aircraft Electronics (L. A. Trade-Tech. College)		EAC	4
Deaf Community Advisory		ACAC	2
Electronics (L. A. Trade-Tech. College)		EAC	1
Electronics (L. A. Valley College)		EAC	1
Electronics Technician (Lockheed)	2A2-5	JAC	5
Electronics Technician - Intercommunication and Sound (L.A. Area)	2A2-1	JAC	9
Electronics Technician - Mfg. (San Fernando Valley)	2A2-2	JAC	2
Electronics Technician (L. A. City Schools	2A2-4	JAC	2
General Advisory (L. A. Trade-Tech. College)		EAC	2
Instrument Technician		EAC	1
Office Machine Repair	5A4-1	JAC	8
Office Machine Repair (L. A. City Schools)	5A4-2	UAC	2
Radio and Television (L. A. Trade-Tech. College)		EAC	1
			40

Joint Apprenticeship and Educational Advisory Committees - 1965-66

REGINALD E. SUNDIN Specialist (17 committees)	COMMITTEE NUMBER	TYPE	NO. OF MEETINGS DURING YR.
Barbers (L. A. Area)	9A2-1	JAC	10
Barbers (San Fernando Valley and Glendale - Joint Meeting)	9A2-2 9A2-3	JAC	12
Drywall (3093)	12A1-2	JTC	12
Household Appliance Repairman	5A4-3	UAC	10
Landscape Gardening	9A5-1	JAC	4
Meatcutters (Harbor Area)	9A1-2	JAC	14
Meatcutters (L. A. Area)	9A1-1	JAC	15
Meatcutters (L. A. Area ESC)		JAC-ESC	8
Meatcutters (So. Calif. Coordinating)		ACAC	4
Paper Advisory (L. A. City Schools)		EAC	5
Printing (L. A. Area)	3A3-1	JAC	4
Printing (L. A. Trade-Tech. College)		EAC	1
Printing - Bookbinders	3A3-2	JAC	10
Printing - Compositors	3A3-4	JAC	12
Printing - Lithographers (L. A. County)	3A3-3	JAC	13
Printing - Graphic Arts (L. A. Trade-Tech. College)		EAC	1
Printing (Printing Industries of America)		EAC	4
			139

Joint Apprenticeship and Educational Advisory Committees - 1965-66

EDWIN M. THOMSEN Specialist (21 committees)	COMMITTEE NUMBER	TYPE	NO. OF MEETINGS DURING YR.
Aircraft Trades (L. A. Trade-Tech. College-Westchester)		EAC	1
Cabinet Making and Millwork		EAC	1
Cabinet Making and Millwork		CAC	1
Cabinet Making and Millwork	12A2-1	JAC	10
Diesel Electric Mechanics (Southern Pacific Railroad)	11A3-1	JAC	1
Los Angeles County Shop Committee (includes Auto Mechanic, Body and Fender Repairman Motorcycle Mechanic, Machinist, etc.)	5A1-5	JAC	2
Machine Shop (L. A. Trade-Tech. College)		EAC	1
Machine Shop (Harbor College)		EAC	1
Machinist (Water and Power)	5A1-9	JAC	2
Machinist (L. A. City Schools)	5A1-11	JAC	5
Machinist, Tool and Die Makers (MDTA)		JTC	10
Machinist, Tool and Die Makers (Adel Precision Products)	5A1-2	JAC	10
Machinist, Tool and Die Makers (Librascope)	5A1-6	JAC	1[illegible]
Machinist, Tool and Die Makers (Grant Oil Tool)		UAC	1
Machinist, Tool and Die Makers (Custom Components)		UAC	2
Machinist, Tool and Die Makers (Tool Specialties Co.-MDTA)		UAC	4
Machinist, Tool and Die Makers (Cannon Electric Co.)	5A1-3	JAC	12
Machinist, Tool and Die Makers (Hughes Aircraft)	5A1-1	JAC	4
Machinist, Tool and Die Makers (L. A. Area)	5A1-4	JAC	12
Machinist, Tool and Die Makers (Valley Area)	5A1-12	UAC	14
Machinist, Tool and Die, Jig Fixture Builder (Lockheed Aircradt)	5A1-10	JAC	12
			118

Joint Apprenticeship and Educational Advisory Committees - 1965-66

JOHN W. WHYTE Specialist (15 committees)	COMMITTEE NUMBER	TYPE	NO. OF MEETINGS DURING YR.
Air Conditioning Engineering (L. A. Trade-Tech. College)		EAC	1
Automatic Fire Control and Sprinkler Fitters (L. A. Area)	7A4-1	JAC	11
Plumbers (L. A. Area)	7A1-1	JAC	11
Plumbers (L. A. County Civil Service)	7A1-3	JAC	2
Plumbers (L. A. City Schools)	7A1-2	JAC	4
Plumbers (Burbank, San Fernando Valley)	7A1-4	JAC	24
Operating Engineers (L. A. County Civil Service)	7A5-1	JAC	2
Refrigeration (L. A. County Civil Service)	7A2-3	JAC	2
Refrigeration and Air Conditioning (L. A. Area)	7A2-1	JAC	15
Refrigeration and Air Conditioning (L. A. City Schools)	7A2-2	JAC	4
Refrigeration and Air Conditioning (L. A. Trade-Tech. College)	•	EAC	1
Steamfitters (L. A. City Schools)	7A3-2	JAC	2
Steamfitters and Industrial Pipefitters (L. A. Area)	7A3-1	JAC	12
Steamfitters and Industrial Pipefitters (L. A. County Civil Service)	7A3-3	JAC	4
Welding (L. A. Trade-Tech. College)		EAC	1
			96

Joint Apprenticeship and Educational Advisory Committees - 1965-66

WILLIAM WOLTJES Specialist (16 committees)	COMMITTEE NUMBER	TYPE	NO. OF MEETINGS DURING YR.
Carpenters (L. A. County	12A1-1	ACAC	12
Carpenters (Local Union JAC)		JAC	11
Carpenters (L. A. Trade-Tech. Model Home Committee)		EAC	6
Carpenters (L. A. Trade-Tech. College)		EAC	1
Carpenters (L. A. County Civil Service)		JAC	1
Plasterers (L. A. City and County)	4A4-1	JAC	16
Plasterers (Harbor Area)		JAC	10
Plasterers (Santa Ana Area)		JAC	10
Plasterers (Training Trust Fund)		ACAC	12
Plasterers (L. A. Area-ESC)		JAC-ESC	8
Plasterers (L. A. Trade-Tech. College)		EAC	3
Plasterers, Ornamental (Motion Picture and Television)	4A4-2	JAC	4
Property Craftsmen (Local Union JAC)		JAC	12
Roofers (Tri-County - Los Angeles, Orange, and Ventura)	12A3-1	JAC	12
Roofers (Tri-County - Los Angeles, Orange, and Ventura)		CAC	10
Set Designers		JAC	12
			140

LOS ANGELES CITY SCHOOLS
Division of College and Adult Education
APPRENTICE EDUCATION OFFICE

NUMBER OF CLASSES AND CUMULATIVE ENROLLMENT

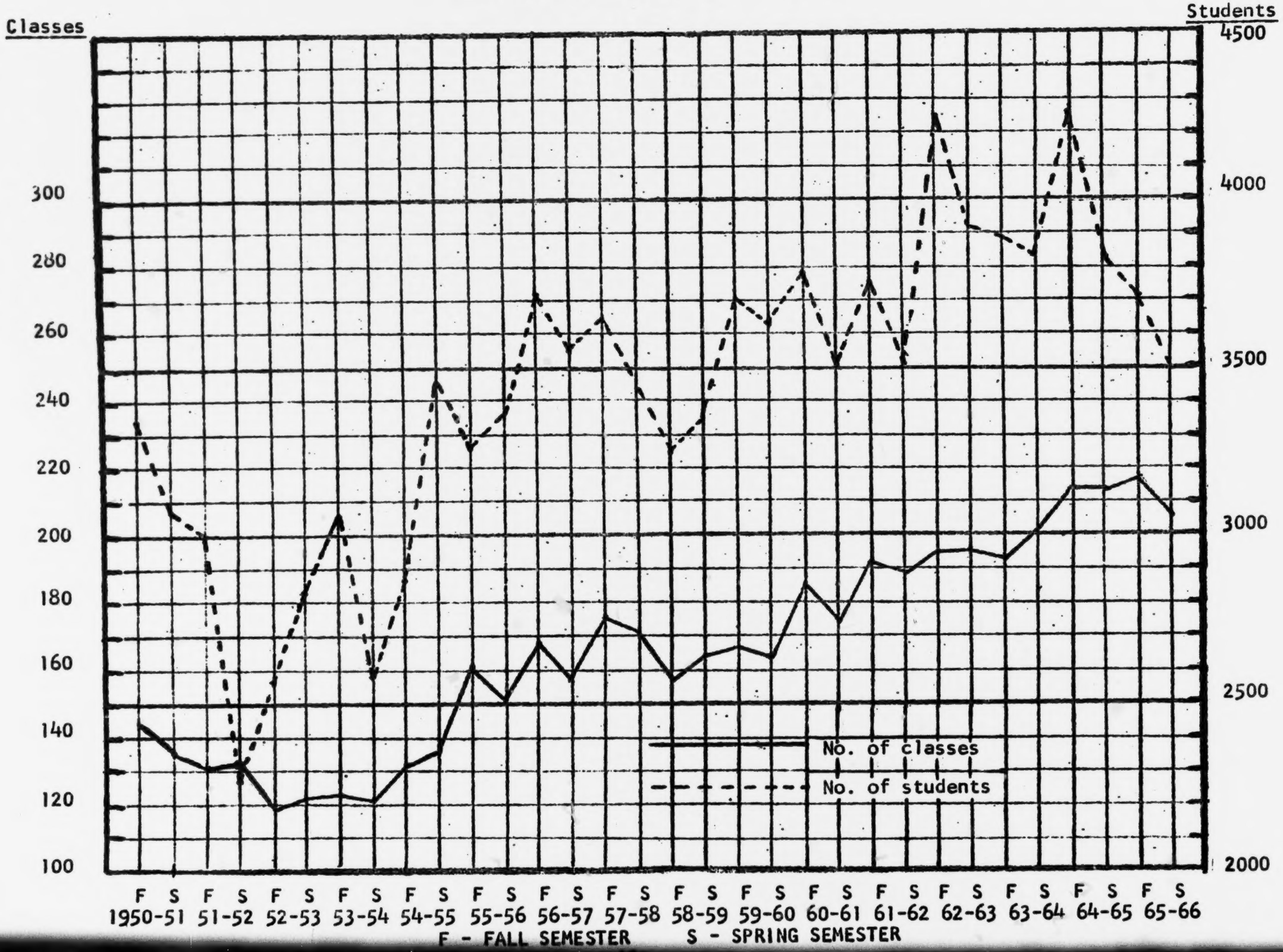
School year 1965-66

SCHOOL	Fall Semester		Spring Semester		Total	
	Classes	Enrollment	Classes	Enrollment	Classes	Enrollment
ADULT SCHOOLS						
Banning	1	42	1	40	2	82
Cambria	10	221	10	237	20	458
Gardena	4	79	3	79	7	158
Garfield	1	21	1	23	2	44
Huntington Park	18	548	19	516	37	1,064
Lincoln	15	338	13	278	28	616
Los Angeles	3	66	3	69	6	135
Manual Arts	2	50	-	--	2	50
North Hollywood	6	200	8	197	14	397
Reseda	1	30	1	26	2	56
San Fernando	13	227	11	204	24	431
South Gate	3	85	3	91	6	176
Van Nuys	15	415	10	304	25	719
Washington	4	84	4	107	8	191
Westchester	2	39	2	39	4	78
ADULT TOTALS	98	2,445	89	2,210	187	4,655
COLLEGES						
Trade-Tech	127	2,850	118	2,808	245	5,658
Valley	6	145	8	185	14	330
COLLEGE TOTALS	133	2,995	126	2,993	259	5,988
GRAND TOTALS - Colleges and Adult Schools					446	10,643

	Adult Schools	Colleges
Per cent of total enrollment	43.74%	56.26%
Average class size	24.89%	23.11%

LOS ANGELES CITY SCHOOLS
Division of College and Adult Education
APPRENTICE EDUCATION OFFICE

NUMBER OF CLASSES AND TOTAL ENROLLMENT 1950-66
(As of May and October each year)



VT 001 559

The Florida Study of Vocational-Technical Education. General Summary and Recommendations.

Florida State Dept. of Education, Tallahassee
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 10Dec64 43p.

*VOCATIONAL EDUCATION; *TECHNICAL EDUCATION; *SCHOOL SURVEYS; HIGH SCHOOLS; ADULT EDUCATION; *EDUCATIONAL PLANNING; AREA VOCATIONAL SCHOOLS; *EDUCATIONAL NEEDS; JUNIOR COLLEGES; PROGRAM IMPROVEMENT; EDUCATIONAL ADMINISTRATION; EDUCATIONAL FINANCE
FLORIDA

This study analyzes available current data that should be of assistance to those who are charged with the development of the State's program of vocational, technical, and general adult education. The state's population growth, employment opportunities, occupational education programs, facilities for occupational education, financing of vocational programs, and the organization and administration of vocational, technical, and general adult education were studied. Estimated needs for occupational education at the high school level included a 100 percent increase in operating expenditures immediately, an annual increase of $1,000,000 to maintain the program, and an expenditure of approximately $79,000,000 to construct shops and laboratories during the 1964-65 school year. Cost of needed facilities for junior colleges was approximately $6,000,000 for the 1965-66 school year with an increase of $2,000,000 per year through 1969-70. Recommendations are presented for a state-wide occupational education program. Guidelines for determining the location and development of area vocational education schools in Florida are listed under the following classes of criteria: (1) population, (2) employment opportunities, (3) present patterns of organization and legal provisions, (4) present and needed financial structure, attitude of public, and facilities. (PS)

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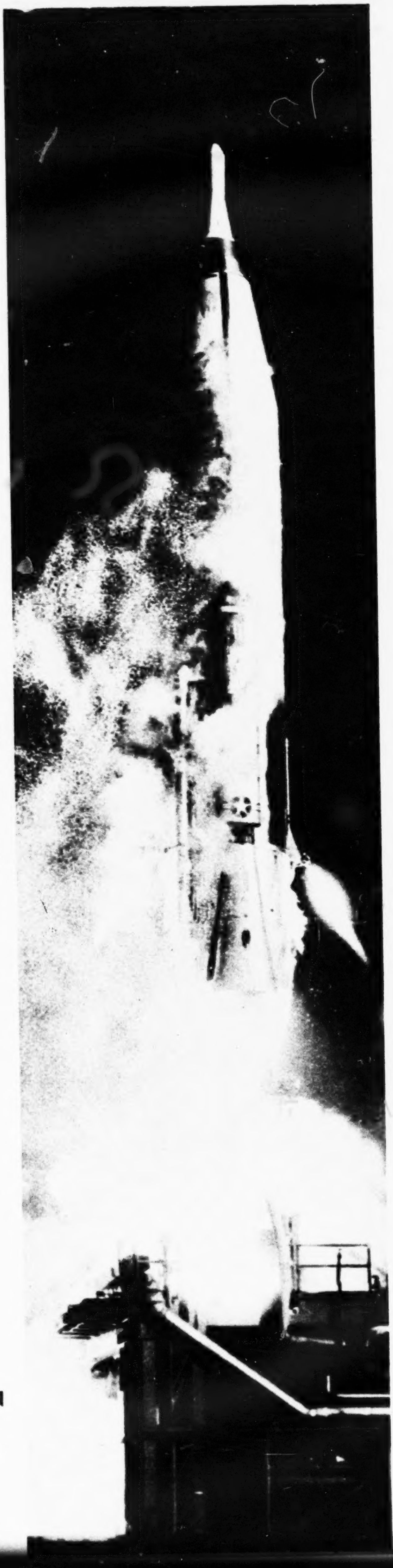
The Florida Study of Vocational-Technical Education



General Summary and Recommendation

VT 015 3

Published by the
STATE DEPARTMENT OF EDUCATION
Tallahassee, Florida
THOMAS D. BAILEY, Superintendent

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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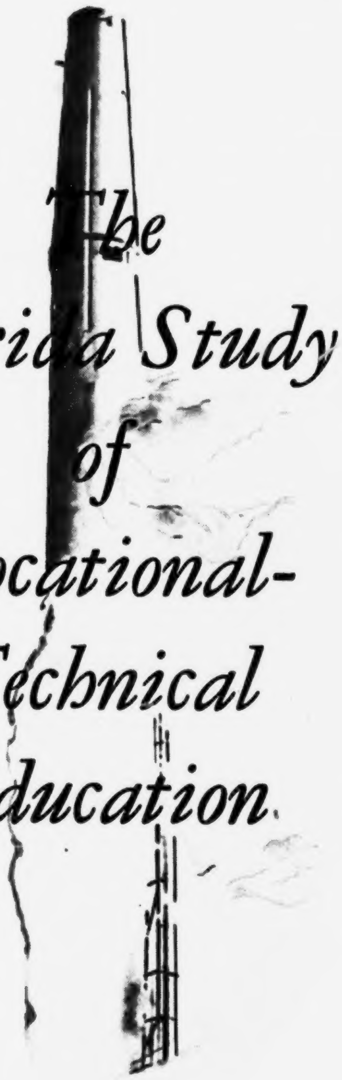

The Florida Study of Vocational-Technical Education

General Summary and Recommendations

Published by the
STATE DEPARTMENT OF EDUCATION
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THOMAS D. BAILEY, Superintendent

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December 10, 1964

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Dr. Thomas D. Bailey
State Superintendent of Public Instruction
Tallahassee, Florida

Dear Dr. Bailey:

In compliance with our agreement dated February 25, 1964, I am transmitting to you this Report of the Study of Vocational, Technical and General Adult Education.

The Report covers all aspects of the problem set forth in the comprehensive outline that was agreed upon. It provides summaries and analyses of data which should be helpful to boards of education and school administrators generally. It is our hope that it may be useful to your Board and to the members of the Florida Legislature in the preparation of legislation necessary for enlarging and strengthening the State's program of occupational education at the various levels of public education.

We are indebted to numerous individuals and agencies for their splendid assistance and cooperation. Both state and county departments of education have provided the data upon which the Report is based.

It is our sincere hope that the Report will be helpful to all who are concerned with the development of an adequate program of Vocational-Technical Education in Florida.

Respectfully yours,

Doak S Campbell

Doak S. Campbell,
Director

DSC:emc

General Summary and Recommendations

Background of the Study

TWO IMPORTANT ELEMENTS provide the background of need for the study of vocational-technical education in Florida. Advancing technology continuously demands new skills and new understandings on the part of men and women who constitute our working force. Automation, as one phase of technological advancement, produces the need for the retraining of countless numbers of workers.

A related problem of great significance is objectified in the number of young Americans who drop out of school before graduation or who terminate their formal education at high school graduation without having acquired any training that fits them for gainful employment. The social as well as the economic consequences of this condition constitute a problem of great magnitude.

In recognition of such needs both state and federal legislation has been recently enacted which calls for substantial expansion of the whole program of occupational education.

In the light of the historical development of occupational education and certain apparent trends, this Study attempts to analyze available current data that should be of assistance to those who are charged with the development of the State's program of Vocational, Technical and General Adult Education.

Because of the limits of time allowed for this Study, it has been necessary to depend largely upon data from secondary sources. Care has been taken to check for reliability in each instance. Certain bodies of data have been secured by means of direct inquiry addressed to qualified sources.

It is assumed that the State of Florida accepts responsibility for providing appropriate educational opportunity for all of its people. It is further assumed that any phase of the educational process that contributes to the fulfillment of this responsibility is a legitimate field for public education and is entitled the time, emphasis, and financial support that is required to achieve reasonable success.

In accordance with this point of view, it is assumed that vocational-technical education is not to be treated as something separate and apart from the academic components of education.

By definition, general adult education is not included as occupational education. However, placement in employment has come to depend more and more upon the individual's level of general education as well as upon occupational skills. For this reason, general adult education is included as a part of the Study.

Also included in this Study is that education which is related to vocational education and which, although not supported by vocational units or set forth in special curricula, may assist in the vocational success of the individual.

Subjects closely related to occupational education such as business education courses, non-vocational home economics, industrial arts, etc., which are offered in the junior high schools, high schools and junior colleges of Florida are included in this Study under the term "related education."

Population and Employment Factors

THE FRAMEWORK within which the State's program for vocational, technical and general adult education is projected comprises many important elements. Some of these elements can be set forth in fairly objective terms. For example, the program by 1970 must be adequate to serve the needs of a total population estimated to be from 6,740,160 to 7,259,903. More precisely, the program must be able to serve the needs of an estimated 300,000 young people and adults who will require occupational education in an undetermined number of programs at the high school and junior college levels.

These elements will dictate the number and qualifications of vocational and technical teachers and supervisors—the number, location, size, and character of the proper physical facilities; and the financial support necessary to make the program effective.

Other elements not now definable in quantitative terms, but none the less certain to be operative, are:

1. Jobs calling for unskilled labor will have all but disappeared. This condition will tend to increase the number of

the population for whom appropriate training must be provided.

2. The up-grading of necessary skills and training on the part of those who qualify for gainful employment will be a continuous process. This will require that programs of occupational education be under constant review and revision. This condition will demand that teachers and administrators alike be willing and able to make constant adjustments of educational programs and procedures. Particularly will the upgrading of necessary skills and training require that some programs of training be commenced in the high school and continued without interruption in the junior college.

3. Many present jobs will have disappeared while others will have undergone substantial change. Also, many entirely new jobs may appear for which new programs of training must be developed.

4. The necessary mobility and flexibility of educational programs adapted to easy movement through high school and junior college will call for joint planning by all divisions concerned with education.

5. The academic and technical components of vocational-technical education must be determined in terms of the objectives of each program, and they must be treated as essential and complementary parts of a unified whole.

6. With clear definition of the nature and scope of the various programs of vocational, technical and general adult education, it is assumed that the proper organization and procedures for administration can be provided so as to assure maximum effectiveness and a minimum of confusion.

Population

A PRIME FACTOR relating to the population of the State of Florida is its steady, substantial growth. In recent decades the population increase has confronted the government of the State with unprecedented demands to provide services and facilities to meet the needs of its citizens.

Between 1950 and 1960 Florida's population increased by 78.7 per cent, the highest among all the states, and its absolute gain was exceeded only by that of California. An annual population growth during the next decade may safely be estimated at 240,000.

Certain variations from general patterns of population as represented by different age groups appear in Florida. For example, while 9.1 per cent of the population are sixty-five years of age and over, in at least three counties this group represents more than 40 per cent of the total population. In nearly one-fourth of the counties the people of this age group constitute at least one-fifth of the total population.

The growth pattern of population during the decade, 1950-60, calls for special consideration. The schoolage population increased by 110 per cent, the 65-and-over group by 133 per cent, while the total population increased by 78.7 per cent.

The schoolage population as reflected in school enrollments provides a reasonably safe index of growth. The 1963-64 enrollment of 1,188,975 pupils in grades 1-12 represents an increase of 57,473 over the enrollment of the previous year.

After the record increases of 1956-57 and 1957-58, there appears to have been some leveling off in the rate of school population increase. It may be reasonably assumed that the rate will approximate 60,000 per year for the next few years.

It seems safe to assume that the demands for vocational, technical and general adult education during the years immediately ahead will call for programs, teachers, and facilities to serve a minimum of:

200,000 high school students
150,000 adults
30,000 to 40,000 junior college students

A major problem grows out of the factors of density and dispersion of the population. Centers for education must be located where the people are in sufficient numbers to sustain a variety of occupational programs, at least five in number. The population must also be large enough to justify the purchase and maintenance of the rather expensive physical facilities which a modern program of vocational-technical education requires. While a few counties have sufficient population to sustain a full-scale program within the county, in the greater part of the State multi-county units will be necessary in order to maintain an effective program. We have already seen that a multitude of small school centers cannot support even a single program for vocational education. Indeed, in too many instances they cannot maintain a creditable minimum academic program.

Employment

Opportunities for employment in Florida tend to follow rather closely the patterns of population concentration and dispersion. There are fourteen counties, each with a population less than 10,000. They are largely rural and sparsely populated. These counties have been generally thought of as being inhabited by small farmers. However, in none of them are as many as half of their employed residents engaged in agriculture. As a matter of fact, between 1954 and 1959, the number of farms in all but two of these counties decreased.

Few industries have come into these counties during the past five years. The total number of industrial plants and the number of new jobs are negligible. Such industries as are found are related to mainly agriculture, lumbering, and fishing.

A large proportion of the population work outside the county of their residence. Thus, a program of vocational-technical education for the people of such areas cannot be based upon employment opportunities in the immediate area. Rather, they must be related to employment needs in the nearest center of population or even in the state as a whole.

Most of the counties in this group can become participants in multi-county units that can provide a full-scale program within commuting distance of the pupils. The two possible exceptions are Franklin and Liberty.

In 19 counties the populations range from 10,000 to 19,999. These counties are also largely rural and are sparsely populated. In these counties the decline in agriculture is not so marked as it is in the counties with a population below 10,000. In fact, in some counties in this group there has been an increase in agriculture in terms of gross production. However, the number of farms and the number of persons agriculturally employed have declined.

Most of the new industries in these counties are related to agriculture, lumbering, or fishing with a few plants representing diversified industries.

In each of the 13 counties with population range from 20,000 to 49,999 the number of farms declined during the past decade. In only three of these counties, Jackson, Highlands, and Martin, are as many as one out of four members of the employed labor force engaged in agriculture.

During the period under consideration, 1961-1963, most of the counties in this group enjoyed an appreciable increase in new industries and new jobs. Food processing, lumbering, construction-related, clothing, and instrument industries are predominant.

The changes that are shown in the national picture have been taking place also in Florida. The group which experienced the most rapid growth during the decade was that composed of professional, technical, and kindred workers. In Florida total employment increased at six times the national rate, while the professional, technical, and kindred workers increased at twice the Florida total rate, or nearly twelve times the national rate.

Another occupational group which experienced rapid growth during the decade 1950-1960 was composed of clerical, sales, and kindred workers. In Florida the growth of this group paralleled that of the professional-technical group (12 times the national rate).

Among manual workers the only occupational group whose rate of increase equalled the national rate was composed of craftsmen, foremen, and kindred workers.

Employment of mechanics and repairmen expanded due to the fact that more workers were needed to maintain, repair, and install the increasing volume of complex equipment that is used in factories, stores, offices, and homes.

The rate of growth of the group generally designated as semi-skilled workers and ordinary laborers was lower than the rate of growth for employment as a whole. This is true both nation-wide and in Florida. Service workers, including waiters, barbers, janitors, policemen, etc., increased rapidly both nation-wide and in Florida.

During the decade, 1952-1962, growth of major industrial groups in Florida was somewhat uneven, the rates being as follows: finance, 133.4 per cent; durable goods and manufacturing, 119.6 per cent; and services, 100.7 per cent.

In terms of the actual numbers of workers involved the picture is somewhat different from what might be assumed where only rate of growth is considered. For example, services, government, and retail trade each employed over 100,000 more workers in 1962 than in 1952. Finance added 50,300 employees and durable goods manufacturing added 61,500 during the ten year period.

The geographic distribution of industrial growth in Florida follows rather closely the pattern of relative density of population in the several counties. A study of the locations of firms in six standard industrial classifications shows that in twenty-nine Florida counties there are no firms in any of the categories. In six other counties there is only one of such firms in each county. The incidence of industrial employment increases, by and large, in relation to the population in any given county.

In the smaller counties two conditions are closely related to the size of the population: (1) the percentage of young people who leave the county, and (2) the number of workers who are employed outside their county of residence. This condition must be taken into account when planning programs of vocational-technical education that are appropriate for a given area. Such programs cannot be restricted to employment opportunities in the immediate geographic area.

Age and Employment

On a nation-wide basis education and age seem to be factors with considerable impact on the opportunity for employment, level of employment, and job mobility. As is to be expected, high school graduates have considerably better opportunity to secure employment than do non-graduates. Moreover, they receive better pay. So far as the non-graduate is concerned, this situation will not improve in view of anticipated decline of job opportunities with low educational and skill requirements.

It is estimated that Florida's labor force will reach 3,158,000 by 1970, an increase of 1,271,000 over that of 1960. This increase would indicate need for a greatly expanded program of guidance and training in order for Florida's youth to be able to compete successfully in the labor market. Furthermore, advancing technology will require provision for many workers to retrain or up-grade their training in order to keep abreast of changes in their occupations.

Although current inventories of needs for various types of trained personnel are not available, plans are under way to secure such inventories on a continuing basis. A recent survey by the Technical Education Section of the Division of Vocational, Technical and General Adult Education yields valuable information that indicates the direction of growth of employment needs. The report shows that in 1964 there were 12,359 technicians in 12 different technologies, and that a total of 8,023 will need to be added by 1966. Civil and construction technology, drafting and design, and electronics technology appear to be the areas of greatest need.

Covering "blue-collar" occupations, projection studies indicate a substantial increase in the number to be employed by 1970. Sales, service, and clerical positions appear to show prospect of the most rapid increase. For women the occupations which may provide large opportunity for employment are those which employ bookkeepers, cashiers, chambermaids, hospital and institutional attendants, sales personnel, secretaries, and waitresses. Occupations offering greater opportunities for men are those which employ automobile mechanics, carpenters, delivery and routemen, insurance agents, underwriters and brokers, managers, painters, salesmen, and truck and tractor drivers.

Occupational Education in Florida

Occupational education in Florida is characterized by two major factors: first, the large number of institutions which provide this type of education, and second, the many types of individuals who are being served.

Occupational curricula offered in the high schools of Florida include vocational home economics, vocational agriculture, certain business and distributive education programs, trade and industrial education, and technical education. There is wide diversity among the counties of the State with respect to the number, the size, and the types of occupational programs that are available in the high schools. For example, in 1963-64, five counties offered no occupational education in their high schools other than home economics. In each of 22 other counties only two programs, home economics and agriculture, were provided. Ten counties have high schools which offer curricula in all five of the occupational areas designed for high school students.

Each public junior college in Florida is authorized to provide four major types of educational services. Included in the services is the provision of occupational education designed to provide students with skills that will enable them to secure employment. All but two of the public junior colleges in Florida provide either one-year or two-year occupational programs, or both. The majority of these programs are designed for persons at the technical or semi-professional level. The persons who are served include high school students, drop-outs, high school graduates, and adults with varying amounts of formal education. Also, what may be termed pre-occupational education is available in many junior high schools by means of exploratory studies in agriculture, home economics, and industrial arts.

Occupational education in Florida is organized around five major occupational fields—agriculture, home economics, business and distributive occupations, industrial occupations, and semi-professional or technical occupations. Each of these fields is essential to the economy of the State of Florida. Special training in each is necessary in order for the citizens of the state to be employable.

Agriculture

Agriculture has been taught in the schools under joint federal and state support since 1917. During 1962-63 courses in agriculture were offered in 204 of Florida's 1700 school centers which included high school grades.

Major emphasis in vocational agriculture throughout its history has been given primarily to studies designed to contribute to the production aspects of agriculture. Basic agricultural information, scientific and technological bases of agriculture, and certain aspects of agricultural engineering have been emphasized.

In recent years, however, the production emphasis in vocational agriculture has been broadened to include many aspects of the field of agribusiness. Agribusiness is used to include all of the occupations concerned with marketing, processing, transporting, and distributing agricultural products. Factors that affect the nature and scope of agricultural education are: (1) the decreasing number of farmers, (2) the increasing size of farms, and (3) the many technological innovations that are increasing the productivity of the land.

Even so, agriculture is, and will continue to be, a major factor in the State's economy. The Florida Department of Agriculture estimates that 375,000 individuals in Florida are engaged in occupations that can be classified as either farming or agribusiness. It is also estimated that 3,700 manufacturing plants in Florida use agricultural and forestry products as their raw material or produce items for agriculture, such as fertilizer, or fruit and vegetable handling machinery.

The continuous challenge which agricultural education faces is one of adapting the traditional aspects of the program to the changing needs of the total field of agribusiness. Technological advances in production agriculture, new developments in marketing, and innovations in the distribution of agricultural products all point to increased employment. The current trends indicate that Florida's high schools must continue to reorient their vocational agriculture programs. They also suggest that a few of Florida's appropriately located junior colleges may find it desirable to offer programs in agricultural technology to meet occupational demands in this field.

Home Economics

Home Economics Education is divided into two major programs—General Home Economics and Vocational Home Economics. The general content of both types of programs is similar at any grade level except that longer class periods, student conferences, and home visitation must characterize the vocational program.

Vocational Home Economics is offered in grades nine through twelve and is designed to serve persons over fourteen years of age who have become, or are preparing to become, homemakers in their own homes, or who intend to seek gainful employment in occupations involving knowledge or skills developed in home economics instruction. The Vocational Home Economics at the high school level must, by regulation, encompass at least two years. The program in any given school may include a required comprehensive course, an advanced comprehensive course, a course in Modern Family Living, and a combination of semester courses from one of the major instructional areas in Home Economics.

Such programs at the high school level, for the most part, emphasize the homemaking part of the program with substantially less emphasis on gainful employment outside the home.

Where Home Economics is offered at the junior college level it is predominantly a university parallel course aimed at serving the needs of students who are interested in preparing for professional positions in Home Economics upon completion of a baccalaureate program. Home Economics is the most widely represented of all the vocational subjects in the high schools.

Distributive Education

The objective of *Distributive Education* is to develop and add to skills and understandings that relate to such activities as selling, sales promotion, buying, business operation, marketing, management, etc. Employment opportunities for qualified persons are found in many types of business establishments, including retailing, wholesaling, and manufacturing firms.

This type of occupational education has not had support from federal funds until the passage of the Vocational Education Act of 1963. Until this time, most emphasis has been given to adult and part-time cooperative programs. Little emphasis has been given to full-time high school or full-time adult preparatory education in the field of distribution. With the possibility of the use of federal funds under the new legislation, this part of the distributive education program should be greatly expanded.

Business Education

Business Education has two major and distinct objectives. One objective is to provide general or basic information which will serve the personal needs of students. The other objective is to provide adequate vocational preparation for students who wish to enter employment in a business occupation or wish to add to competencies required by a job in a business occupation which they currently hold.

A majority of Florida high schools offer courses that are designated as business education. However, many such courses consist of only one or two courses in personal typing, business mathematics, and the like. A few high schools offer a broad range of elective courses in business and at the same time provide a comprehensive program aimed at providing students with competencies needed to secure employment in an office occupation.

Vocational office education is designed to serve high school students who are interested in clerical and secretarial occupations.

Up to this time such programs have been limited in number and they have been financed wholly from state and local funds. However, the Vocational Act of 1963 provides specifically for "business and office occupations."

Due to the continuing strong demand for individuals with competency in this field, the program should be substantially extended and enlarged.

Cooperative Education

Cooperative Vocational Education is not a distinct vocational field but rather a procedure for organizing an educational program wherein business and industrial establishments cooperate with the schools by providing training-on-the-job during the normal school day for students enrolled in the public schools. Under such an arrangement the student spends part of his day in the high school continuing his general education and studying subjects related to his area of employment. The rest of his school day is spent working in the cooperating establishment.

In Florida there are three Cooperative Vocational Education programs in operation: Cooperative Distributive Education (C. D. E.), Cooperative Business Education (C. B. E.), and Diversified Cooperative Training (D. C. T.). A fourth program, Cooperative Industrial Education, has been authorized but is not currently in operation.

Some high schools offer all three of the cooperative curriculums while other schools offer only one or two of them. There is need for considerable expansion of all the special cooperative curriculums.

Industrial Education

Industrial Education has been defined so as to include "any industrial pursuit, skilled or semi-skilled, trade, craft or occupation which directly functions in the designing, producing, processing or repairing of any manufactured product, and any service, trade or occupation which is not classified as agricultural, commerical, professional or homemaking."

Industrial Education in Florida presently provides (1) curriculums for secondary school youth who are regularly enrolled in school, (2) curriculums for out-of-school youth and adults, and (3) courses for employed persons to up-grade them in their industrial occupations. Thus it encompasses both preparatory education for young people and adults who wish to enter selected industrial occupations and supplemental training for employed persons who wish to improve their occupational competencies.

Industrial Education has maintained a slow but relatively steady growth in enrollments. Official reports indicate that 36,459 different individuals participated in this program in the school year, 1963-64.

Industrial Arts

Industrial Arts has unique and important functions in relation to the total program of education. It is not intended to provide specialized preparation for specific industrial occupations although it may make some incidental contribution to such training. Essentially, Industrial Arts is one of the "general education" offerings in the schools that serves the needs that most youth have in common. It especially serves those students who need instruction involving general shop and related experiences.

Industrial Arts serves a special need which involves the arousal of interest and the discovery of aptitudes that relate to special preparation for industrial employment. It provides valuable exploratory experience for students and can be especially helpful in keeping potential dropouts in school.

The Industrial Arts program in Florida usually begins in grade 7 and continues through grade 12. In junior high school the emphasis is primarily on exploration and orientation. Thus far, federal funds have not been made available for Industrial Arts. This means, of course, that if this valuable service is to be provided, adequate funds must be made available from state and local sources.

Point must be made of the extremely short supply of teachers of Industrial Arts. The extreme shortage affects all of the counties, but the smaller counties with the lower salaries feel the effect most acutely.

Facilities for Occupational Education

THE PROVISION of adequate facilities for occupational education is essential if Florida is to provide an effective program of education for all of its citizens. The quality of the facilities as well as the number of well-equipped laboratories available for use have considerable impact on the quality of occupational education. It is reasonably clear that if the potential numbers of students who can profit from occupational education are to be served effectively, then costly facilities and equipment must be so planned as to serve the greatest number of people with as little duplication as possible.

An inventory has been made of existing facilities for occupational education at the high school and junior college levels. Likewise an evaluation has been made of the adequacy of such facilities as are available. Also, an estimate has been made of the cost of replacing temporary facilities and of constructing needed new facilities in order to serve all those who may conceivably profit from an adequate occupational education program.

During the 1963-64 school year there were 2,076 laboratories, both permanent and temporary, in use in the high school, vocational and adult programs of the State. These laboratories served an average of 149,762 students daily. Approximately ten per cent of the laboratories in use were considered to be temporary structures. Temporary laboratories served an average of 8,709 students daily.

Permanent laboratories in the high school centers were used an average of 7,325 periods daily. The total number of periods available for use was 11,202. While the efficiency of utilization can be improved, the use that is presently made of the laboratories compares favorably with the use generally made of comparable facilities such as science laboratories.

Data regarding the distribution of laboratories show that the largest number was concentrated in the more populous counties of the State. More facilities and a wider variety of types of laboratories were available to students in the more populous counties. Facilities in the less populous counties, for the most part, were limited largely to laboratories for home economics, agriculture and, in a few cases, industrial arts. There was a pronounced need for facilities in the less populous areas of the State in relation to needs for vocational and technical education.

Evaluation of permanent facilities in high schools by respondents indicate that 71 per cent of the laboratories were accommodating the students satisfactorily; and, in some cases, exceptionally well. Approximately 29 per cent of the permanent laboratories need to be improved.

During the 1963-64 school year there were 208 occupational education laboratories available for use in the junior colleges of the State. Of that number, 130, or 62.5 per cent, were classified as permanent facilities. These laboratories served an average of 10,188 students daily. Temporary laboratories served an average of 2,669 students daily.

Permanent laboratories in the junior college centers were used an average of 32 hourly periods per week. Student station use was 39 per cent. While room period utilization appeared to be satisfactory, student station use was below a justifiable minimum and, therefore, should be improved. The data indicate that existing permanent laboratories can and should serve additional students.

As to the distribution of permanent laboratories, the data indicate that the junior colleges located in the more populous centers of the State had both a larger number and a greater variety of types of laboratories than those in the less populous areas. As a matter of fact, the junior colleges in the less populous areas had relatively few laboratories and in some counties there were none.

The data regarding the evaluations that were made by the respondents indicate that 91 per cent of the permanent laboratories in junior colleges were functioning satisfactorily. Some were considered superior. The most acute problem with regard to existing space needs was found at Daytona Beach Junior College, which had the largest number of temporary facilities in current use.

Funds with which to construct facilities for occupational education are available from a variety of sources. Within certain limitations State funds allotted for construction purposes may be used for constructing occupational facilities both at high school centers and in junior colleges. However, money available from the State has necessarily been restricted in its use so as to meet the needs for classrooms in the growing areas of the State. A liberalization of State policy in 1962 enabled school boards to construct facilities more nearly fitted to their local instructional needs than had been the case in prior years. There are no restrictions in this regard in the use of junior college construction funds.

Until the present time no special funds have been available with which to construct facilities for occupational education. Currently special funds are available under the provisions of the Higher Education Bond Amendment for the construction of facilities at junior colleges and vocational-technical schools. Policies need to be established which will guide responsible authorities in the allocation of funds for use in the construction of facilities for occupational education at junior colleges and other centers designated as area vocational education schools.

Also, the Vocational Education Act of 1963 provides for the appropriation of funds with which to construct occupational education facilities. Funds under this Act may be used to construct ". . . instructional and auxiliary rooms and space necessary to operate a program of vocational instruction at normal capacity, such as classrooms, libraries, laboratories, workshops, cafeterias, office space, and utility space." The costs of initial equipment for the above needed facilities and all necessary building fixtures and utilities, furnishings and instructional equipment are permissible expenditures under the terms of the Act. One-third of the funds allotted to each state can be used for this purpose. Federal funds used for the construction of area vocational education schools must be matched dollar-for-dollar.

In order to meet adequately the needs of all high school students who should benefit from occupational education, an initial expenditure of approximately $79,000,000 appears to be needed to construct the shops and laboratories needed during the 1964-65 school year. Estimates indicate that this need will increase at the rate of approximately $7,000,000 annually until the 1969-70 school year. In the 1969-70 school year the need will increase by approximately $11,500,000, assuming that each year's needs have been met on a current basis.

Estimates of the cost of needed occupational education facilities at junior colleges is approximately $6,000,000 for the 1965-66 school year. This estimate includes both the cost of construction and equipment. The need will continue to increase at the rate of approximately $2,000,000 per year through the 1969-70 school year.

Total cumulative estimates for high school and junior college occupational facilities are as follows:

Year	*High Schools*	*Junior Colleges*
1964-65	$79,083,616	Not Estimated
1965-66	7,107,210	$6,357,380
1966-67	7,246,236	2,228,360
1967-68	7,016,834	2,293,900
1968-69	7,058,560	2,031,740
1969-70	11,588,900	2,031,740

Financing Vocational and Technical Education in Florida

The Financing of vocational, technical, and related education in Florida has been assessed in relation to the total problem of providing adequate support for education at secondary, adult, and junior college levels. Consideration has been given also to the fact that vocational and technical education, although a part of the total education program, performs a distinct function in the preparation of the individual as a productive economic unit. A guiding principle in this assessment has been that an important function of government is to provide educational opportunities for all children, youth, and adults that will prepare them for productive citizenship in keeping with individual choices and abilities. It has been assumed that adequate financing will be provided for that purpose.

Florida's Ability to Support Education

A comprehensive study of Florida's ability to support education would involve an analysis of many factors in considerable depth. However, an analysis of the data considered in this Report reveals that Florida ranks highest among the states in the Southeast and near the average for the Nation in its ability to support education. Specifically, Florida ranked the highest among the twelve states of the Southeast and twenty-fifth in the Nation in personal income in 1962. The national average income for 1962 was $9,429, while Florida's average was $8,683.

Florida also ranked high in respect to the ratio of the number of school-age children to the number of wage earners in the adult population. Florida ranked the highest among the twelve states in the Southeast and tenth in the Nation in 1961 on this index.

It is reasonable to conclude that Florida is more able to provide financial support for education than are the other states of the Southeast, but is less able than are one-half of the states in the Nation.

Florida's Effort to Support Education

It is reasonable to assume that a wealthy state can spend more on education than a poor one can spend. Although a state that spends more may not be making a greater effort than one that spends less. Some states make up for less ability by spending a larger proportion of the money they have for their public schools.

The analysis made in this Study was not intended to be exhaustive. However, Florida's effort to support education has been examined in relation to the proportion of total personal income that is allocated to school revenues. In 1962 Florida ranked thirty-second among the states of the Nation with 4.1 per cent of its income allocated to public school revenue receipts. The average for the Nation was 4.3 per cent. Only four of the states in the Southeast ranked lower than Florida, while Louisiana, North Carolina and Georgia ranked higher, devoting 5.4 per cent, 4.4 per cent, and 4.2 per cent, respectively, of their income to support education.

The data that were considered clearly indicate that Florida's effort to support education was neither as great as that in most of the Southeastern States, nor as high as its relative ability indicates it should be. If Florida made the same effort as that made by Louisiana, its expenditures would approach the estimated expenditures per pupil made by California in the 1963-64 school year. California ranked seventh in the Nation while Florida ranked thirty-fourth in expenditures per pupil.

The Ability and Effort of Florida's Counties

Comparisons were made of the ability and effort of Florida's counties to support education. Consideration has also been given to the per pupil expenditures made by the various counties for the support of their educational programs.

The index of taxpaying ability was used as the best indicator of the ability of a school system to contribute to the support of its minimum program of education. The analysis indicates that the counties with the greatest wealth are not the counties that are spending the most money per pupil. For example, Duval and Hillsborough Counties ranked high with respect to the ability index but ranked sixty-sixth and fifty-sixth, respectively, in respect to expenditure per pupil for education. At the other extreme of the ability scale are Glades, Wakulla, and Liberty which are spending $490, $448 and $416, respectively, as compared to Duval's expenditure of $280 and Hillsborough's $306.

An analysis of expenditures per pupil for administration shown by counties for the 1962-63 school year reveals the median expenditure to be $10.19. Many of the more populous counties such as Pinellas, Polk, Hillsborough, Duval, and Dade were found to be among the lowest one-third with respect to expenditures per pupil for administration, while the less populous counties tend to spend more to administer their programs. It is of particular significance to note at this point that the less populous counties generally operate smaller school centers thus requiring more administrative personnel to administer fewer pupils. Likewise, many of the less populous counties have high salaried board members. Both of the foregoing factors contribute to the high per capita cost for administration.

The effort being made by the counties of the State was assessed in relation to two pertinent factors; (1) the amount of revenues allocated beyond the minimum required by the State for the support of the Minimum Foundation Program and, (2) the amount of public school revenue from local sources as a percentage of personal income.

All counties allocated some revenues beyond the minimum required of them. All but three counties, Hamilton, Jackson, and Okaloosa allocated funds in excess of one hundred per cent more than that required for the minimum program; twenty-eight counties, two hundred per cent more; and nine counties, three hundred per cent more. It might be inferred from the analysis of these data that nearly all counties are able to support a more adequate program than is now being expected of them. Since the level of occupational education could be substantially improved, it may perhaps be concluded that the school systems of the State should spend more money to support a higher level minimum program of education than is currently in effect.

Analysis of data which relate public school revenue from local sources to personal income indicate that many of the small rural counties appear to be making an effort greater than might be expected of them. Some of these counties include Gulf, Franklin, Glades, Dixie, and Okeechobee. Duval and Hillsborough are examples of counties that appear to be making less effort than other counties of comparable size and wealth.

Funds for Vocational and Technical Education

Funds for the support of occupational education at the high school level come from state, local, and federal sources. However, the principal source of funds for the support of occupational education is the State's Minimum Foundation Program of Education. The basic unit of support is the instructional unit.

Units for vocational and technical education are approved each year on a current basis within limits set by the budget that has been approved by the Legislature. The general practice followed by the State Department of Education is to allocate one instructional unit for each qualified vocational teacher who renders approved instructional services in accordance with current State regulations.

The Legislature approves the number of "vocational units" which each major vocational education service may allocate each fiscal year when it approves the biennial budget for the public schools. Budget requests from the State Department of Education are based upon subjective estimates formulated from requests by the various counties and modified by the several state supervisors for each of the major service areas. State supervisors who prepare the estimate of need preliminary to making budget requests have no objective basis for determining the need for "vocational units" in the several counties. Each county in need of increasing its allocation of vocational units is required to submit an application for new and additional units. If units are available and the proposal is justified, and if it meets minimum standards of teacher qualifications and program, requests are usually granted.

Occupational education in the community junior college is supported by the State's Minimum Foundation Program for Junior Colleges. Instructional units for occupational education are derived from two sources—vocational units allocated to the county board for the high school vocational program, and instructional units allocated directly to the community junior colleges. Because of variations in regulations and the administrative policies of the two divisions of the Department of Education that are responsible for the administering of units, problems both financial and administrative have developed.

The data indicate that an inadequate number of units has been allocated to support an effective program at either the high school or the junior college level. The current method used to allocate units seems to lend support to inequities as to the number of units that are allocated to the several counties of the State. This results in an uneven distribution of units among the major vocational services in relation to actual need. Furthermore, the freeze of units by the Legislature has impeded the development of programs for vocational and technical education during times when such programs should be increasing in number.

Approximately three-fourths of all funds spent for the support of occupational education come from State sources, while Federal funds amount to approximately five to seven per cent of total expenditures. The amount of Federal funds will increase, but the State must match these funds on a dollar-for-dollar basis. Consequently, State funds will also need to be increased.

Major Problems and Issues

If it can be assumed that the need for vocational education is directly related to the number of people in school, the data analyzed show that inequities have resulted from the system used by the State Department of Education in the distribution of vocational units to the various counties. An objective basis is needed with regard to the number of units allocated to the counties. Furthermore, because of the changing nature of occupational education, there no longer seems to be need for the strict designation of units for the various types of vocational programs. It would appear that an allocation of units earmarked as vocational would provide adequate control of the use of vocational units and, at the same time, encourage the growth of vocational programs in whatever occupations the demand may exist at the county level.

Samples of opinions from local directors of vocational education, school superintendents, junior college presidents and others point to the need for increasing the value of vocational and technical instructional units. Evidence tends to support the contention that it costs more to operate a vocational and technical education program than it costs to operate the regular academic program.

Because of the cost and the lack of qualified personnel readily available to plan and implement new programs of occupational education, some form of grants-in-aid may be required in order to encourage the development of such programs in appropriate institutions of the State.

If an adequate program of occupational education is to be provided for the youth and adults of the State, occupational education must be stimulated and encouraged, not impaired by severe reductions in funds. Therefore, it is important that the current freeze on certain vocational units must be lifted.

Cost Estimates

The data here presented show the need for expanding and improving existing programs in occupational education if the needs of the State are to be met. If an adequate program of occupational education at the high school level is to be maintained, operating expenditures for the program should be increased by more than one hundred per cent immediately, with an average annual increase of $1,000,000 to maintain the program at an acceptable level.

Estimated needs for non-credit units at the junior college level for use in occupational programs will require approximately $1,351,000 in 1965-66 with an annual increase of approximately $300,000 per year.

Organization and Administration

THE ORGANIZATION and administration of vocational, technical and general adult education in Florida follows rather closely the patterns that have developed in the other states. Primary responsibility rests in the State Board for Vocational Education. Although this Board is composed of the same personnel as is the State Board of Education, it operates under certain laws and regulations that apply specifically to vocational, technical and general adult education.

With the recent development of the community junior colleges in Florida another board has been created under the title, the State Junior College Board.

There are three state-wide boards that have certain responsibilities for the State's program of occupational education. The State Board of Education is a constitutional board while the other two have been created by statute.

The fact that, since 1917, a separate board has been responsible for the administration and supervision of occupational education has tended to contribute to the concept that occupational education must be something separate and apart from the main stream of education. Thus, the problem of maintaining a proper relationship between the academic and non-academic components of education requires strong cooperative action.

The same problem appears at the over-all operational level. The State Department of Education performs its functions through eight professional divisions. The Division of Vocational, Technical and Adult Education has primary responsibility for the administration and supervision of this important area of education. However, each of the other several divisions bears some relationship to the work of all other divisions.

The coordination of the work of the several divisions takes place, at least theoretically, by means of voluntary joint planning and by sharing information. Any lack of coordination appears to be due to the fact that the heads of the several divisions do not have the time needed in order to develop over-all policies and procedures.

It is strongly recommended that coordinate action among the several divisions be made a matter of first priority until such time as substantial progress has been achieved in this direction.

Should voluntary action at the divisional level fail to be effective, then appropriate administrative action would be indicated. The alternative would seem to be the provision of a coordinating office above the divisional level with primary responsibility for such coordination. Coordinate action at the State level will tend to make for essential unity at the real points of application, the county school systems.

Supervisory and consultant services require numerous specialists in the various types of occupational programs that are included in the state-wide program. These specialists, together with their specific duties and responsibilities in the program area they represent, are indicated in the State Plan for Vocational, Technical and Related Educational Services. It should be especially noted that the supervisory and consultant services are available at all levels of vocational and technical education—in the high schools, the community junior colleges, separate vocational and technical schools and adult classes.

Since the professional supervisory and consultant service personnel serve all areas, including the community junior colleges, the Division of Community Junior Colleges does not require the inclusion of such personnel within its organization. Thus, the organization of the Division requires relatively few professional personnel. The organization of the Division of Community Junior Colleges is shown in outline in Chart 1.

The phenomenal growth of the number and size of community junior colleges during recent years would seem to indicate the need for providing certain additional professional personnel in this Division. This need is especially pressing in view of the imminent great expansion of vocational-technical programs in the community junior colleges.

The special need at this time is for individuals who can provide effective liaison and coordination between the community junior colleges and the several program area specialists in the Division of Vocational, Technical and Related Educational Services and can assist junior colleges in dealing with problems involving accreditation. Furthermore, there should be sufficient personnel to carry forward the research services that are essential to the proper operation of a state-wide program in the community junior colleges.

Inasmuch as the responsibilities of the Division of Vocational, Technical and Related Educational Services cover a much broader range, and particularly since the professional, supervisory, and consultant services are all included in this Division, the organizational structure is necessarily much larger and more complex. This organization is set forth in minute detail in the *State Plan,* previously referred to, and is shown in outline in the organizational chart.

The Survey Staff has carefully studied the recommended additions to the professional staff in relation to the anticipated needs. It is their opinion that the need for these additions is real, and that it is imperative. And, while it may not be feasible to add all of the suggested individuals at once, the entire number should be available within the next two to four years.

Because of special emphasis in recent federal and state legislation, the Area Vocational Education School requires special consideration at this time. It is apparent that in the minds of some this is a new type of educational institution that is separate and apart from existing institutions. However, this is not the case. The Vocational Education Act of 1963 (Public Law 88-210) provides a detailed definition as follows:

> "(2) The term 'area vocational education school' means—
>
> (A) a specialized high school used exclusively or principally for the provision of vocational education to persons who are available for full-time study in preparation for entering the labor market, or
>
> (B) the department of a high school exclusively or principally used for providing vocational education in no less than five different occupational fields to persons who are available for full-time study in preparation for entering the labor market, or
>
> (C) a technical or vocational school used exclusively or principally for the provision of vocational education to persons who have completed or left high school and who are available for full-time study in preparation for entering the labor market, or
>
> (D) the department or division of a junior college or community college or university which provides vocational education in no less than five different occupational fields, under the supervision of the State Board, leading to immediate employment but not leading to a baccalaureate degree, if it is available to all residents of the State or an area of the State designated and approved by the State Board, and if, in the case of a school, department, or division described in (C) or (D), it admits as regular students both persons who have completed high school and persons who have left high school."

Thus it will be seen that a prime consideration of the Law is the provision for the use of existing types of institutions to which facilities may be added in order to strengthen the program of vocational, technical and general adult education in a given attendance area. This provision makes for economy since it assumes that a given facility may serve the needs of students of various levels of educational achievement. It also provides against unnecessary duplication of such facilities.

Provision is also made for the establishment and development of new and separate institutions in areas where the use of existing institutions and facilities is not feasible. The determination of geographic areas to be served and the type of institution to be designated as the Area Vocational Education School call for a definition of conditions to be met and procedures to be followed. A principal purpose of this Study is to present criteria or guide lines which school authorities at both county and state levels may use in determining the location of area schools.

Basic to the consideration of the location of an area vocational education school, whether designated in an existing school or established as a new and separate unit, are the factors of the size and distribution of the population to be served. Simply stated, this means that there must be within the area a sufficient number of students to justify vocational-technical curricula in "no less than five different occupational fields."

It seems clear, therefore, that if full opportunities for vocational-technical education (at least five curricula) are to be available to all of Florida's young people, a considerable number of multi-county areas must cooperate to that end.

Fortunately, this type of cooperative effort is not without successful precedent. The pattern is being used in a number of other states. In Florida the development of such multi-county units for the support of community junior colleges is noteworthy.

Attention of the Study Staff has been called to a number of conditions which call for review of existing laws and regulations in which apparent conflicts may exist. Among the areas of interest to which specific attention is given are:

1. *Basis for Determining the Allocation of Units:*

It appears that corrective legislation that would place the allocation of units for vocational and technical education at all levels on a uniform basis would be desirable.

2. *Certification Requirements:*

At the present time the requirements for the certification of teachers of technical education are different for the two levels (high school and junior college) on which teaching is done in this field. These requirements should be restudied and revised so as to provide reasonable uniformity as well as such flexibility as may be needed in order to make it possible to secure and maintain teachers in these and other occupational fields with the desired qualifications.

3. *Patterns for Staffing:*

Provision is made in the State Plan for leadership in county programs of vocational and technical education by professional personnel. The State Plan also spells out the relationships between county and junior college programs, (5.1, p. 6-7). This arrangement appears to meet requirements for the effective coordination of the work at both the county and the junior college levels. As has been stated previously, successful coordination is contingent upon the full acceptance of the concept of a unified program involving both the high school and the junior college. It is suggested, therefore, that special study of this provision should be made in the light of its operation during the year. Such study should provide a basis for any needed refinements of the process.

4. *Cooperating Contiguous Counties:*

Where two or more contiguous counties are cooperating in the support and operation of a community junior college, there is the possibility of conflict regarding the location and support of an area vocational-technical center. For example, a county or counties engaged in such cooperation may desire to establish an area vocational center at some location other than that in which the community junior college is situated.

Such action is prohibited by Chapter 230.63 (2) of the Florida Law. Any other alignment of counties for the purpose establishing area centers would have to include such population totals as to insure the requisite number of students to support an Area Vocational Technical Center in accordance with the terms of the laws and regulations affecting such schools.

It is also true that under the provisions of the law any county that is participating in the operation of a community junior college may proceed to establish an area vocational school within its borders provided that it can meet the criteria for establishing an Area Vocational Education School.

Any variation from the use of the areas already defined would lay a burden upon the proponents of such variation to prove that valid consideration has been given to size and density of population, relative ability to supply financial support, and accessibility to the majority of population to be served. Such factors would be considered over against any consideration of community self-interest. It is the opinion of the Study Staff that the limitation here discussed is sound and that its repeal or substantial modification would not be in the best interest of the State.

Recommendations

THIS REPORT has presented analyses of major factors that affect vocational, technical and general adult education in Florida. It has presented the essential elements of an adequate state-wide program to meet the needs for occupational education for all of the people of the State.

In the light of the findings here presented the following recommendations are presented for consideration by the appropriate authorities.

1. In order that occupational education bear a justifiable relationship to manpower needs a continuing inventory of employment and employment needs in the State must be available.

It is recommended that funds be provided for the compilation of a comprehensive, classified inventory, and for continuing such inventory regularly from year to year.

It is suggested that a proper agency to provide this service is the Research and Statistics Department of the Florida Industrial Commission.

2. The high schools of Florida must continue to reorient their vocational agriculture programs to the developing field of modern agriculture.

It is recommended that periodic studies of trends in agriculture be made by the Division of Vocational, Technical and General Adult Education in cooperation with the College of Agriculture of the University of Florida in order that appropriate curricula may be developed.

3. Continued emphasis should be given to agribusiness in the high schools with further development of this program.

It is recommended that this program be extended into a limited number of junior colleges.

4. In order for Home Economics to benefit fully from funds to be provided through federal legislation, more emphasis will need to be given to Home Economics programs that are related directly to gainful employment.

It is recommended that an analysis be made at once to determine the types of such programs that are in greatest demand.

5. *It is recommended* that preparatory occupational programs in business and distributive education be greatly expanded in Florida's high schools and junior colleges.

6. A comprehensive guidance program which is an integral part of the total educational effort must be available in order that all students may receive maximum benefits from the educational services of the schools. Florida falls far short of the desired minimum of guidance services in many of its schools.

It is recommended that each county school system in the State that has not already done so, provide at least one properly qualified guidance counselor for each 400 students in its high schools and junior high schools.

It is further recommended that the higher institutions that are responsible for the training of counselors give greater emphasis to occupational guidance.

7. Temporary occupational facilities in use at high school centers, vocational schools, and junior colleges should be replaced. Their early replacement is essential to the improvement of the on-going vocational and technical program in the State.

It is recommended that the replacement of these facilities should be placed high on any system of priorities that may be established for the construction of vocational and technical education facilities.

8. *It is recommended* that a carefully planned program of new construction be implemented to provide for the construction of needed facilities at the various centers which are designated as area vocational education schools.

The facilities to be constructed at properly designated centers should be justified in terms of a proposed instructional program which is geared to potential employment opportunities and the number of students necessary to assure an acceptable rate of laboratory and student station utilization.

9. *It is recommended* that State policy with regard to the assignment of priorities for new construction be re-examined.

Consideration should be given to liberalizing State regulations regarding the use of Capital Outlay and Debt Service and Matched Building funds so as to provide more freedom to construct facilities of an instructional nature which are needed to fulfill the requirements of a comprehensive educational program.

10. Consideration should be given to the possible use of a standard building components system in the construction of laboratory and shop facilities for occupational education.

It is recommended that a careful study be made to determine the feasibility of such a system and whether sufficient savings in cost can be made to justify it.

11. *It is recommended* that early attention be given to the reorganization of school centers in the less populous counties of the State so as to make possible a more effective occupational education program as well as the reduction of the per pupil costs for administration.

12. *It is recommended* that increased financial support be provided for occupational education on both the State and local levels. The increase in funds should broaden the minimum program of education that is made available to the people of Florida and should be an integral part of the Minimum Foundation Program of Education.

13. *It is recommended* that the allocation of vocational units to the several counties and to the community junior colleges be based on an objective formula using either a ratio of vocational units to basic instructional units or a school population ratio. In either case, the number of units allocated should provide support for an adequate program of occupational educa-

tion. Furthermore, funds for the support of vocational and technical units allocated should be transferred at the State level to the appropriate minimum foundation program.

14. *It is recommended* that consideration be given to increasing the value of vocational units so as to reflect the higher costs of operating vocational and technical programs.

It is further recommended that some form of grants-in-aid be made available to counties and community junior colleges to assist financially with the initiation of new programs of occupational education. Federal funds may be used with considerable effectiveness in this regard.

15. *It is recommended* that a constant value be placed on all vocational and technical units available for use in the same minimum foundation program, or in cases of transfer of units between programs.

16. *It is recommended* that the "legislative freeze" on vocational units used for cooperative education be removed.

17. *It is recommended* that consideration be given to the elimination of the discrete compartmentalization of vocational unit allocations. It would appear that an allocation of units designated as vocational but not specified as to major service area would be sufficient earmarking to control the use of units.

18. *It is recommended* that the allocation of non-credit units for occupational programs in junior colleges be established as a part of the Minimum Foundation Program for Junior Colleges, and that the allocation of units to support this program be based on an objective criterion related to the number of persons requiring occupational education services.

19. *It is recommended* that coordinate action among the several divisions of the State Department of Education, covering the relationships between occupational education and the other components of the total educational program, be made a matter of first priority.

Special attention should be given such action until substantial progress shall have been achieved in this direction.

20. The Division of Community Junior Colleges maintains no professional staff for supervision of the several occupational studies at the junior college level. It depends upon the specialists in the Division of Vocational, Technical and General Adult Education for such supervisory services. Its professional staff, therefore, is small in number. With the growth of the community junior colleges in number and size, the central staff is too limited to perform the duties that are expected of that Division.

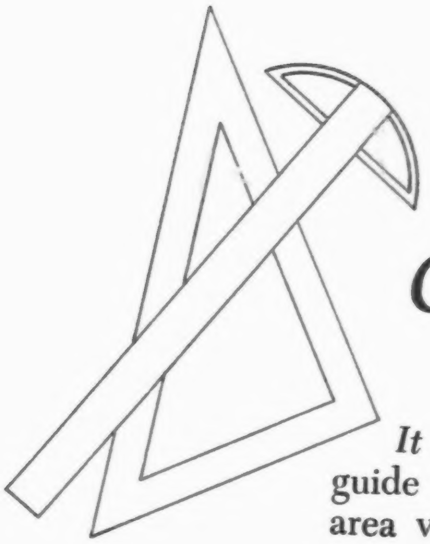
It is recommended that a limited number of professional personnel be added to the Division of Community Junior Colleges who can (1) provide effective coordination between the junior colleges and the several program area specialists, (2) assist the junior colleges with problems involving accreditation, and (3) carry forward research services essential to a state-wide system of community junior colleges.

21. The Division of Vocational, Technical and General Adult Education maintains a fairly large professional staff for the supervision of occupational and related educational services at both the high school and junior college levels. The number of such personnel is not adequate to provide for the necessary expansion of the state-wide program.

It is recommended that substantial additions be made to the professional staff of this Division.

22. *It is recommended* that regulations for certification of teachers be re-studied and revised so as to provide reasonable uniformity and at the same time such flexibility as may be needed in order to make it possible to secure and maintain teachers with the desired qualifications.

23. *It is recommended* that the law that provides for the transportation of students (Ch. 236.05(3)) be so amended that transportation units may be provided for students attending area vocational education schools on the same basis as for those attending community junior colleges.



Criteria

It is recommended that the following criteria be used as guide lines in determining the location and development of area vocational education schools in Florida.

1. Population

Criteria are indicated for two types of schools: A, where an existing high school or junior college is designated as an area vocational education school, and B, where a separate area vocational education school is to be established.

In either case, no new area vocational education school should be approved which would tend to reduce the enrollments in existing institutions, especially in those already marginal in terms of student population and other factors which affect the quality of the program.

In any area where the population is sufficiently large to support more than one area vocational education school, it is essential that clear differentiation be made as to function, level of programs and types of students to be served.

A. Criterion: *The geographic area to be served by an existing institution which is designated as an area vocational education school must have a population sufficiently large to assure a minimum ADA of 150 full-time equivalent day-time students enrolled in the vocational and technical program.*

An existing institution, either a comprehensive high school or junior college, can support an addition to its operation at lower cost than can be accomplished by establishing a new institution to serve the same number of vocational and technical students. An existing institution has the administrative and operating staff and it provides library and other supporting education services. Furthermore, the additional students supported by adding a vocational program tends to diffuse the operating expenses over a larger number of students who, consequently, derive the benefits of a larger institution.

For these reasons the designation of an existing institution as an area vocational education school would require a less stringent population criterion than would the establishment of a new and separate area school.

B. Criterion: *The geographic area to be served by a separate institution which is designated as an area vocational education school must have a population sufficiently large to assure a minimum ADA of 300 full-time equivalent day-time students enrolled in the vocational and technical program.*

The Study Staff recognizes that there will be local conditions which may possibly require the establishment of separate area vocational education schools. In some school systems existing high schools may serve the role of "parent school" while sending students to an area vocational education school for vocational and technical education courses. In some of the larger counties, there are existing vocational and technical education schools which are currently performing a reasonably satisfactory service and which may be designated as area vocational education schools. However, before new and separate institutions are established, conclusive evidence should be presented which clearly indicates that existing institutions cannot assume the responsibility for the vocational and technical education program. Furthermore, every effort should be made to make all existing specialized institutions more comprehensive.

This criterion is projected in view of the fact that a separate institution must have a minimum administrative staff in addition to the required teaching staff in order to service the vocational-technical programs. Such staff would necessarily include at least a principal or director, a guidance counselor and a librarian. Furthermore, if a broad program of adult and related educational services is to be provided, provision for additional personnel will be required.

2. *Employment Opportunities*

Criterion: *The educational program of an area vocational education school must bear a justifiable relationship to employment* *opportunities for graduates in the area to be served as well as in the larger labor market area.*

In the application of this criterion a thorough occupational survey must be conducted in order to determine employment opportunities and the potential number of students to be served.

While in more populous areas this criterion is fairly easy to apply, in the counties with relatively sparse population there are usually also extremely limited opportunities for employment, both as to number and variety. In such cases the vocational program of area vocational centers must be justified in relation to employment opportunities in the nearest metropolitan centers or even in the State as a whole.

3. Relation to Present and Possible County and Multi-County Organizational Patterns

Criterion: *An area vocational education school should be so located that it will be within commuting distance of the students to be served.*

This criterion should apply whether the area vocational education school serves a single county or a multi-county unit. Except in cases which involve extenuating circumstances, multi-county areas for this purpose should coincide with planned or existing multi-county areas for junior colleges.

The geographic areas that were planned for junior colleges were developed so as to provide educational services within an area described by a thirty-five mile radius for 99 per cent of the total population of the State.

Accordingly, the need for development of a more effective multi-county organization to provide any type of educational services for the greatest number of the State's population should be clearly demonstrated before modifying the existing pattern.

4. Relation to Present and Needed Legal Provisions

Criterion: *An area vocational education school must comply with the provisions of the Vocational Education Act of 1963, as well as with State laws that apply.*

The Vocational Education Act of 1963 defines the term "area vocational education school" in terms of four types of institutions that may be so designated. It also requires that the school be "available to all residents of the State or an area of the State designated and approved by the State Board."

The Act further requires that, in the case of a separate technical or vocational school or the department or division of a junior college which provides vocational education in no less than five different occupational fields, the school admit as regular students both persons who have completed high school and persons who have left high school.

Numerous Florida laws bear directly or indirectly upon the question of the placement, development, regulation and support of area vocational education schools. Discussions concerning them appear in the body of the Report.

Florida law makes it possible for two or more contiguous counties to establish or acquire "area vocational-technical centers." However, the law specifically restricts such action where a county board is party to an agreement with another county or counties for the acquisition or operation of a junior college. (Florida Laws, 1963, Ch. 220.63).

5. Present and Needed Financial Structure

Criterion: *Substantial evidence must be presented showing the ability and the willingness of citizens and school officials within the area to be served to provide adequate financial support to fulfill the minimum requirements of the Minimum Foundation Program for Education, as well as the State Plan for the Improvement of Vocational, Technical and Related Educational Services as adopted by the State Board for Vocational Education.*

Cooperating counties in multi-county organizational arrangements should contribute to the support of the vocational and technical program in a manner determined to be equitable. Due consideration should be given to local financial ability and the extent of student participation in the program of the area vocational education school.

6. Interest and Attitude of Local Administration and Supporting Public

Criterion: *Substantial evidence must be presented indicating that the school administration, as well as the people to be served, are in accord with the purposes to be served by the area vocational education school; that they consider this institution to be an essential, integral part of the total program of public education and not as a separate and less important part of that program.*

Care must be taken to see that other considerations, however meritorious in themselves, are not accorded undue weight in relation to this criterion. Community pride and availability of physical facilities whose chief attractiveness lies in the fact that they have been declared surplus, provide examples of influences that are frequently encountered.

7. Facilities

Criterion: *Modern educational facilities adequately equipped should be planned and located so as to serve the greatest number of people with as little duplication as possible.*

Facilities should be provided that comply with acceptable standards for a modern vocational and technical program. Obsolete, inadequate buildings and equipment should not be tolerated.

Facilities planned should provide for a high rate of space utilization. In areas of high concentration of population a maximum of space utilization should be required before any duplication of facilities is permitted.

In sparsely populated areas where the enrollment potential is low, travel distance, potential space utilization, curriculum needs and facility costs should be taken into account before facilities are duplicated. Exception should be granted only under rare, extenuating circumstances.

BETTER SCHOOLS
MAKE
BETTER COMMUNITIES

VT 001 599
Office Education in California.

California State Dept. of Education, Sacramento
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 65 15p.

*OFFICE OCCUPATIONS EDUCATION; *STUDENT ENROLLMENT; *HIGH SCHOOLS; *JUNIOR COLLEGES; *OCCUPATIONAL INFORMATION; SCHOOL SURVEYS
CALIFORNIA

Office education offers preparation for careers in office occupations through a program to provide initial, refresher, and upgrading skills leading to employment and advancement in office careers. This report includes a definition and objectives of office education, enrollment data in office education in high schools and junior colleges of California for 1956-57 and 1961-62, examples of occupations and office education programs at the high school and junior college levels, and services provided by the Bureau of Business Education of the California State Department of Education. A comparative study of the 1956-57 and 1961-62 enrollments in office education courses in California public high schools showed an increase of 49 percent in skill courses and an increase of 44 percent in basic business courses. The enrollments in junior college accounting and business data processing courses increased 76 percent. During the same period, secretarial, clerical, and machine subject enrollments in junior colleges increased 44 percent, and basic business enrollments increased 76 percent. (PS)

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OFFICE EDUCATION IN CALIFORNIA

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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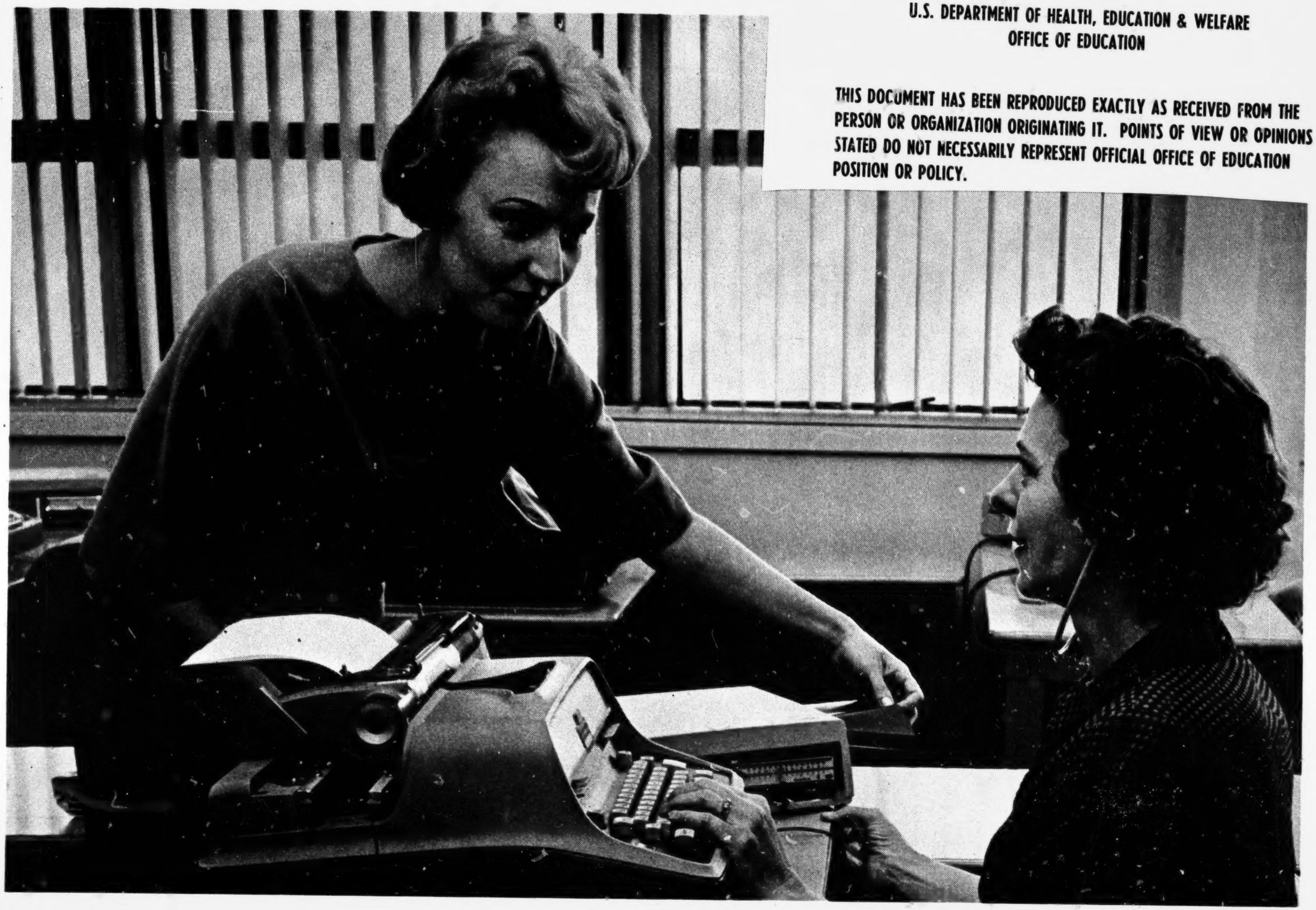

VT 01599 6

CALIFORNIA STATE DEPARTMENT OF EDUCATION • SACRAMENTO, 1965

OFFICE EDUCATION IN CALIFORNIA

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DEFINITION

Office education is designed to prepare students for employment in office occupations. The definition of office occupations, stated in the rules and regulations for the administration of the Vocational Education Act of 1963, is that these occupations are those pursued by individuals in private or public enterprises or organizations which are related to the facilitating function of the office and includes such activities as recording and retrieval of data, supervision and coordination of office activities, internal and external communication, and reporting of information.

Programs designed to prepare students for these occupations are offered in the public schools of California in the high schools, the junior colleges, and the adult schools.

IMPORTANCE

The continuing increase in the functions performed by office employees which are required to meet the growing complexity of modern business occupations will result in an increase of the number of persons employed in office occupations in spite of the introduction of automated processes.

The trend in the number of persons employed in these occupations has been increasing since 1900. Between 1900 and 1950 office activities have grown 750 percent while between 1950 and 1960 the increase was 32 percent. It is predicted that between 1960 and 1975 office employment will increase approximately 45 percent.

In October, 1964, there were about 10,500,000 persons employed in the United States in clerical and kindred occupations. Over 1,000,000 were employed in these occupations in California. This figure represented 14.8 percent of the total labor force.

Office workers are employed in nearly every organization. An increasing proportion of office workers are employed in finance, service and related industries such as banks, insurance and real estate companies, and professional and business services. Wholesale and retail trade, government, transportation, communication, and public utilities also employ large numbers of office workers.

OBJECTIVES

The goals of office education are directly related to the manpower needs of the nation. Office education offers preparation for careers in office occupations through a program to provide initial, refresher, and upgrading skills leading to employment and advancement in office careers.

In the office education program emphasis is placed upon vocational preparation of skills necessary for office work and the development of occupational intelligence which permits the skills to be properly placed into operation. Training is carried to the point of developing marketable skills, abilities, understandings, attitudes, work habits, and appreciations to enable the student to get and hold a job in the office occupation.

Office education is education for office careers. The learning experiences in this program are vocationally oriented, stressing the career objective of the individual student. This program prepares high school, post-high school, and adult students for office employment. Instruction includes the basic general education courses required for all students and the special skill courses, correlated with special general business courses appropriate to preparation for office employment.

ENROLLMENT DATA

High School

Enrollment data is collected by the Bureau of Business Education every five years. The last survey was made in 1961 and the next survey of enrollments is due in 1966.

During 1962, a comparative study of the 1956-57 and 1961-62 enrollments in the various courses offered in the office education curriculum in California public high schools showed an increase in the number of enrollments.

In 1956-57 there were 251,572 enrollments in office education skill courses compared to 373,843 in 1961-62. The increase of 122,271 enrollments was a 49 percent increase.

The enrollments in basic business courses in 1956-57 were 58,567 and 84,376 in 1961-62. The increase of 25,809 enrollments was a 44 percent increase.

Considering the normal rate of growth based upon these figures it can be expected that in 1963-64 enrollments in office education skill courses would be approximately 448,500 and about 101,000 in basic business courses.

Junior College

A 1962 study of California junior college enrollments in accounting and business data processing courses; secretarial, clerical, and machine courses; and in basic business courses indicated that there was a definite trend upward in enrollments in 1961-62 compared to 1956-57.

There were 14,007 enrollments in junior college accounting and business data processing courses in 1956-57 and 25,571 in 1961-62. The number of enrollments increased 11,564 during these years which was a 76 percent increase.

Secretarial, clerical, and machine subjects enrolled 34,751 in 1956-57 compared to 49,945 in 1961-62. This increase of 15,194 enrollments represented a 44 percent increase during these years.

In 1956-57 enrollments in basic business subjects amounted to 39,497 and in 1961-62 to 69,495. The increase of 29,998 enrollments was a 76 percent increase.

Based upon the rate of growth indicated by these figures the estimated 1963-64 enrollments in the various kinds of courses follow:

Accounting and Business Data Processing	33,200
Secretarial, Clerical, and Machine	59,000
Basic Business Subjects	90,000

The high school offers preparation in entry office occupations. Examples of such programs follow:

Clerk-typist (Clerical)

Does general clerical work not requiring special schooling or training and requiring the use of typewriter in the accomplishment of a majority of the duties: Typewrites letters, reports, and other matter from rough draft or corrected copy. Files records and reports. Makes out bills, answers telephone, sorts and distributes incoming mail, addresses outgoing mail, and does other clerical work, performing one or a combination of clerical duties as assigned.

Examples of jobs related to Clerk-typist: There are no specific jobs. The clerk-typist, depending on the departmental assignment, may have a variety of specializations.

Training Program

Graduation requirements - English, Mathematics, Social Science, Science

General Business
Typing
Record Keeping
Office Practice (Business Machines, Office Procedure)
Economics
Business English
Vocational Work Experience Education

General Office Clerk (Clerical)

Depending on the size and type of office, performs any combination of the following or similar clerical duties: Makes up and files reports. Tabulates and posts data in various record books. Takes telephone orders. Checks cash registers. Gives information to callers. Sends out bills. Checks calculations. Keeps a small set of books (Bookkeeper II). Takes inventories (Inventory Clerk). Adjusts complaints (Adjustment Clerk). Operates various office machines, such as calculating machine (Calculating-machine Operator). May be required to do miscellaneous typing, or may be required to take and transcribe dictation (Stenographer).

Examples of jobs related to the general office clerk which may be above the entry level:

Administrative Clerk
Bookkeeping Clerk
Payroll Clerk
Timekeeper
Office Girl, General
Billing Clerk
Receptionist
PBX Operator

Training Program

Graduation requirements - English, Mathematics, Social Science, Science

General Business
Typing
Bookkeeping
Office Practice (Business Machines, Office Procedure)
Economics
Business English
Vocational Work Experience Education

Stenographer

Takes dictation in shorthand of correspondence, reports, and other matter and transcribes dictated material. May be required to be versed in the technical language and terms used in a particular profession. May perform a variety of related clerical duties (Clerk, General Office). May take dictation on a stenotype machine (Stenotype Operator), or may transcribe information from a sound-producing record (Transcribing-machine Operator). When transcribing foreign languages may be known as Foreign-language Stenographer.

Some examples of jobs related to stenographic which may be above the entry level:

Technical Stenographer
Legal Stenographer
Public Stenographer
Medical Stenographer

Training Program

Graduation requirements - English, Mathematics, Social Science, Science

General Business
Typing
Shorthand
Bookkeeping
Office Practice (Business Machines, Office Procedure, Transcription)
Economics
Business English
Vocational Work Experience Education

Key-punch Operator

Records accounting and statistical data on tabulating cards by punching a series of holes in the cards in a specified sequence, using a punch machine similar in operation and action to a typewriter: Places card on base of machine by hand or automatically by pressing a lever, and positions carriage for perforating operation. Following written information on records, punches corresponding numbers or symbols on the machine keyboard, thereby transcribing the written information into perforations on the tabulating cards. May operate a tabulating machine (Tabulating-machine Operator), a sorting machine (Sorting-machine Operator), and a verifying machine (Verifier Operator).

Examples of related jobs which may be above the entry level:

Verifying Machine Operator

Training Program

Graduation requirements - English, Mathematics, Social Science, Science

General Business
Typing
Bookkeeping
Office Practice (Business Machines, Office Procedure)
Key Punch Machine
Economics
Business English
Vocational Work Experience Education

Tabulating-machine Operator

Operates a machine that automatically analyzes, makes calculations, and translates or divides information represented by holes punched in groups of tabulating cards, and prints the translated data on form sheets, reports, special cards, or accounting records: Sets or adjusts machine to add, subtract, multiply, and make other calculations. Places cards to be tabulated in feed magazine and starts machine. May file cards after they are tabulated. May sort punched cards (Sorting-machine Operator), punch information on cards (Key-punch Operator), and verify punched cards (Verifier Operator). May be designated according to trade name of machine operated.

Some examples of jobs:

IBM Machine Operator
Rand Machine Operator
Tabulating Supervisor

Training Program

Graduation requirements - English, Mathematics, Social Science, Science

General Business
Typing
Bookkeeping
Office Practice (Business Machines, Office Procedure)
Tabulating Machine
Economics
Business English
Vocational Work Experience Education

The junior college offers preparation in the office occupations open to high school graduates for those persons who did not take the courses in high school or who feel that they need additional preparation. In addition, programs are included for occupations which are of a more specialized nature or which require more skill.

Examples of such programs follow:

Accountant

Accountants compile and analyze business records and prepare financial reports, such as profit and loss statements, balance sheets, cost studies, and tax reports. Public accountants provide their services on a fee basis to various business enterprises and individuals. Private accountants, often referred to as industrial or management accountants, handle the financial records of a single business firm and work on a salary basis. Government accountants work on the financial records of government agencies or of private business organizations and individuals whose dealings are subject to government regulation.

Accountants in any field of employment may specialize in such areas as auditing, tax work, cost accounting, budgeting and control, or systems and procedures. Public accountants, however, are most likely to specialize in auditing or tax accounting; private accountants, in management or cost accounting. Many accountants in the federal government are employed as Internal Revenue agents, investigators, and bank examiners.

Training Program

Graduation requirements - Government, Fine Arts, Effective Writing, Effective Speaking, Science, Social Science, Health

Principles of Accounting
Introduction to Business
Business Mathematics
Introduction to Data Processing
Typing
Business Machines
Economics
Cost Accounting
Payroll Accounting
Business Law
Business Correspondence

Secretary

Secretaries, in addition to doing stenographic work, relieve their employers of numerous routine duties, and often handle a variety of business details on their own initiative. They may schedule appointments for their employers, arrange for airline tickets and hotel reservations, answer some kinds of correspondence, and may supervise other clerical personnel. Some secretaries may specialize in legal, medical, or other technical work. Both stenographers and secretaries may look forward to promotion to administrative assistant, office supervisor or other responsible positions.

Training Program

Graduation requirements - Government, Fine Arts, Effective Writing, Effective Speaking, Social Science, Science, Health

Introduction to Business
Introduction to Data Processing
Economics
Business Mathematics
Personal Development
Typing
Shorthand
Accounting Fundamentals
Business Machines
Office Procedure
Business Correspondence

In addition to the general secretarial program many junior colleges offer the following courses to prepare students for specialized fields:

Legal Secretary - Business Law, Technical Typing
Medical Secretary - Business Law, Principles of Insurance, Medical Terminology, Human Anatomy and Physiology, Medical Secretarial Procedures, Medical Records, General Psychology
Technical Secretary - Survey of Electronics, Mathematics, Technical Typing, Report Writing

Adult Schools

All of the above programs may be offered in adult schools for the purpose of providing initial training, refresher courses, or upgrading of skills.

SERVICES OF THE BUREAU

Services of the Bureau of Business Education of the California State Department of Education to school districts and offices of county superintendents of schools include activities designed to improve instruction in office education in the public schools of California.

Following are typical kinds of services of staff members of the Bureau of Business Education:

1. Conducting state-wide and regional conferences of business educators, school administrators, and businessmen

   Examples:

   Impact of Automation on Office Occupations -- conferences of businessmen

   Teaching Economic Understandings in Business Education -- conferences of businessmen, administrators, business education teachers

   Improving Instruction in Business Education Courses, Impact of Automation on Office Occupations, Teaching Economic Understandings in Business Education Courses -- conferences of administrators and business education teachers conducted in cooperation with county superintendents of schools

2. Preparing releases and publications

   Examples:

   Report of Conferences Listed Above

   Planning and Equipping Business Education Classrooms

   Report of the National Workshop on Economics for Business Education Teachers

   Suggested High School Programs for Preparation for Employment in Office Occupations

3. Consulting with local school districts and offices of county superintendents of schools on business education problems

   Examples:

   Local District and County Institutes of Business Education Teachers

   Personnel of Business Education Departments and Administrators of Public Schools

4. Conducting research in business education and coordinating research programs working with school districts, state colleges, and universities

   Examples:

   Methods to Improve Instruction in Office Education

   Curriculum for Preparation for Office Occupations

5. Developing experimental programs in business education

   Examples:

   Use of Multiple Dictation Facilities in Shorthand

   Curriculum for Preparation for Office Occupations

   Vocational Work Experience Education Programs in Office Occupations

6. Conducting status studies of business education

   Examples:

   Enrollment Studies

   Summer Session Offerings and Enrollments

   Study on Methods of Improving Instruction

VT 001 687
Vocational Education for New Jersey Today. Summary Report.

Committee to Study Vocational Education in New Jersey
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jun64 20p.

*VOCATIONAL EDUCATION; HIGH SCHOOL STUDENTS; PROGRAM PLANNING; STUDENT ENROLLMENT; *EMPLOYMENT OPPORTUNITIES; *STATE SURVEYS; *EDUCATIONAL NEEDS; *EMPLOYMENT PATTERNS; POPULATION TRENDS
NEW JERSEY

This report documents the needs in New Jersey for vocational education by these statistics: (1) employment status, July 1963, (2) education outlook by 1970 for every 10 students enrolled in school, (3) percent change in employment in New Jersey, 1960-1970, (4) public high school vocational-technical education enrollment, 1962-1963, and (5) 1962-1963 investment in vocational education. From the information presented the committee concluded that vocational education is not available to all who need it and that New Jersey needs to offer vocational education to 60 percent of its youth. General recommendations were to provide programs with a solid occupational foundation built on knowledge of present job opportunities and projected future needs and to make training opportunities equally available to all regardless of race, sex, or place of residence. Specific recommendations included: (1) every local school district must make the tuition payment to permit students to attend another school district in order to receive desired public vocational education, and (2) Maximum state aid for vocational-technical evening school programs must be increased from $10,000 to $20,000. (SL)

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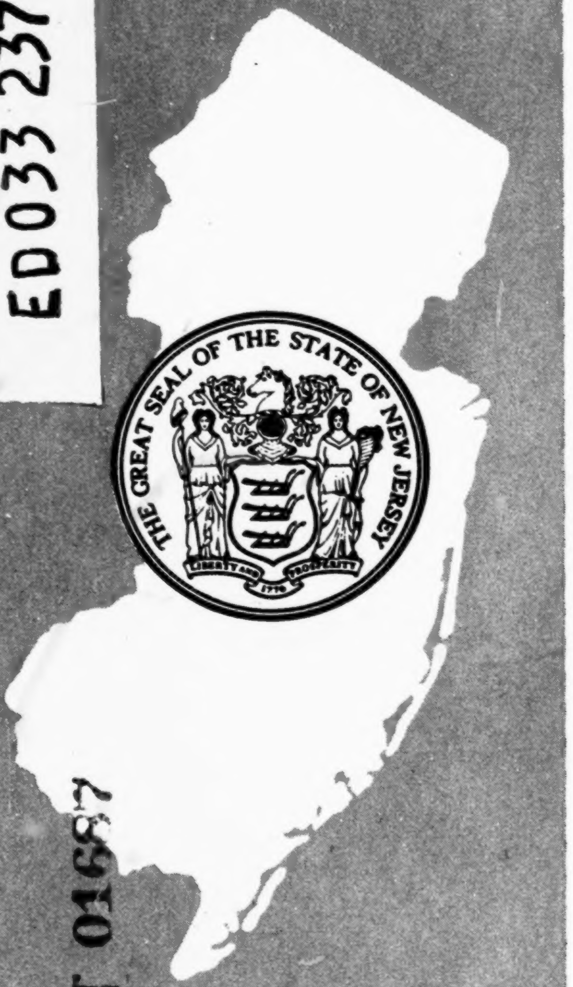

VT 01687

VOCATIONAL EDUCATION
for New Jersey today

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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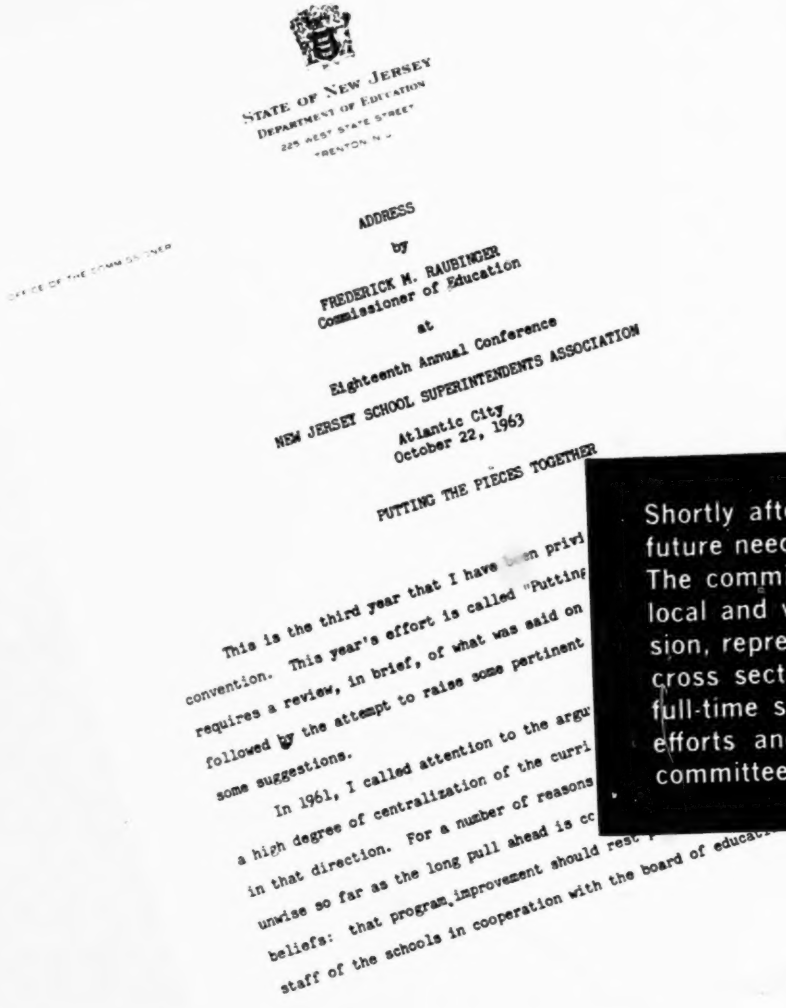
SUMMARY REPORT OF THE COMMITTEE TO STUDY THE NEEDS OF VOCATIONAL EDUCATION IN NEW JERSEY



STATE OF NEW JERSEY
DEPARTMENT OF EDUCATION
225 WEST STATE STREET
TRENTON N J

OFFICE OF THE COMMISSIONER

ADDRESS

by

FREDERICK M. RAUBINGER
Commissioner of Education

at

Eighteenth Annual Conference
NEW JERSEY SCHOOL SUPERINTENDENTS ASSOCIATION

Atlantic City
October 22, 1963

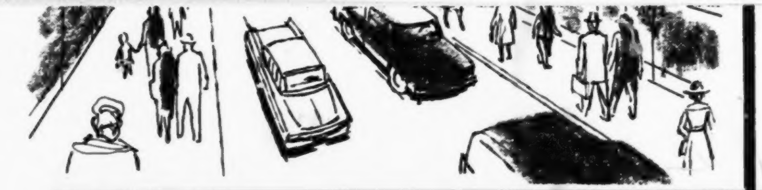
PUTTING THE PIECES TOGETHER

This is the third year that I have been privi
convention. This year's effort is called "Puttinç
requires a review, in brief, of what was said on
followed by the attempt to raise some pertinent
some suggestions.

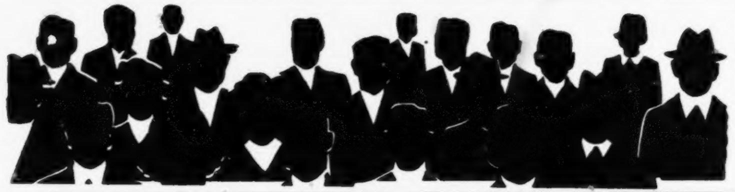
In 1961, I called attention to the argu
a high degree of centralization of the curri
in that direction. For a number of reasons
unwise so far as the long pull ahead is cc
beliefs: that program improvement should rest
staff of the schools in cooperation with the board of educat

Shortly after this convention, I expect to appoint a committee to explore the future needs of vocational education particularly at the secondary school level. The committee will include broad representation: superintendents, principals, local and vocational school board members, members of our Vocational Division, representatives of the vocational schools, labor, business, industry and a cross section of citizens in general. I hope to provide the committee with a full-time secretary, who will be responsible for coordinating the committee's efforts and supplying necessary facts and information as the work of the committee dictates.

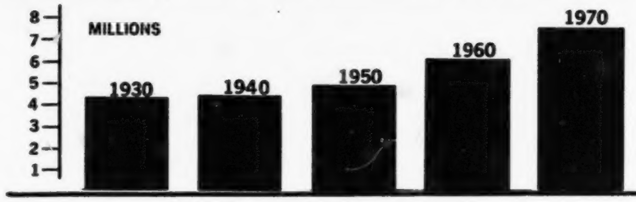
NEW JERSEY IS:



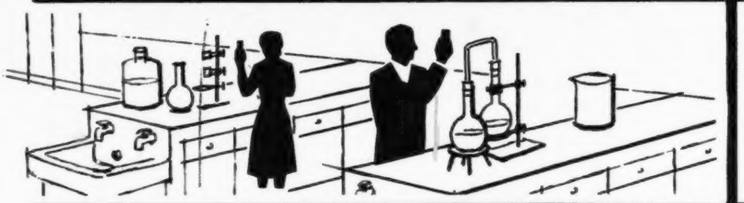
highly urbanized — the most urbanized state in the Union — an urban poulation of 5,374,369 which represents 86.6% of the State's population



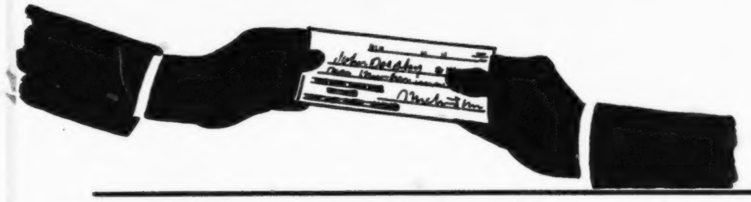
densely populated — 860 inhabitants per square mile — most densely populated state in the Union



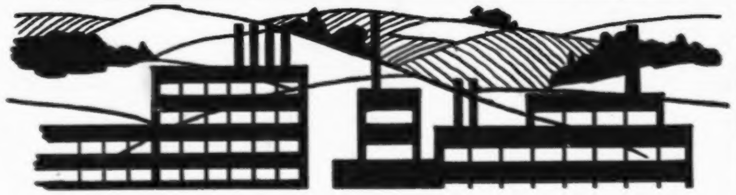
rapidly growing



technologically oriented — more than 10% of all the research undertaken in United States is performed in New Jersey laboratories



very affluent — per capita personal income was $2,887 in 1962 — 6th highest among the States



industrially diversified — among the most widely industrially diversified states, yet first among the states in farm income per acre.

NEW JERSEY IS 7th IN NATIONAL POSITION OF MANUFACTURED GOODS

1st

CHEMICALS & PRODUCTS

3rd

INSTRUMENT & RELATED PRODUCTS
APPAREL & RELATED PRODUCTS

5th

ELECTRICAL MACHINERY

6th

STONE, CLAY & GLASS PRODUCTS
FOOD & KINDRED PRODUCTS
RUBBER PRODUCTS

7th

FABRICATED METAL PRODUCTS
PULP, PAPER & PRODUCTS
PRINTING & PUBLISHING
TEXTILE MILL PRODUCTS

8th

PETROLEUM & COAL PRODUCTS

9th

MACHINERY EXCEPT ELECTRICAL
TRANSPORTATION EQUIPMENT
MISCELLANEOUS MANUFACTURE

10th

PRIMARY METALS & INDUSTRY

Source: New Jersey, Land of Amazing Industrial Advantages (Newark, N.J., Public Service Electric and Gas Corporation, Nov. 1962), p. 5

VITAL STATISTICS ON NEW JERSEY'S EMPLOYMENT JULY 1963

Total Manufacturing Employment	799,000
Total Non-Manufacturing Industry	1,307,000
Total Non-Agricultural	2,106,000
Total Agricultural Employment	58,800
Total Work Force Includes self-employed, domestic and unemployed	2,687,900

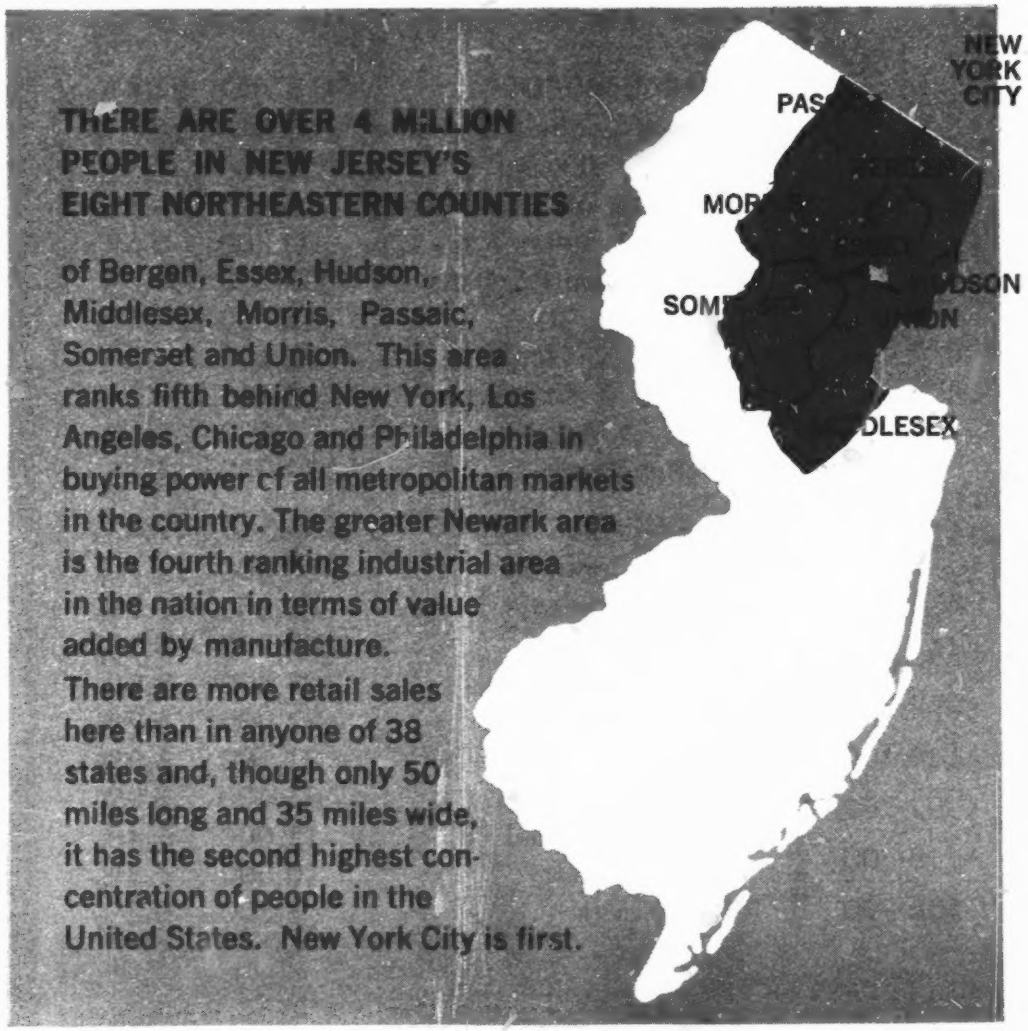
NONMANUFACTURING INDUSTRY (1,307,000)

Wholesale & Retail Trade	410,200
Service and Miscellaneous	283,100
Government	252,000
Transportation and Utilities	154,400
Finance, Insurance and Real Estate	92,700
Mining	5,700
Construction	108,900

MANUFACTURING (799,000)

DURABLE GOODS	**(418,700)**	**52.4%**
Electrical Goods & Machines	116,600	14.6%
Machinery (Except Electric)	58,000	7.3%
Transportation Equipment	39,500	4.9%
Fabricated Metal Products	52,700	6.6%
Primary Metal Products	37,500	4.7%
Stone, Clay, Glass	36,100	4.5%
Instruments, Clocks	32,100	4.0%
Furniture & Fixtures	8,400	1.1%
Lumber & Wood	4,900	0.6%
Miscellaneous	32,900	4.1%
NON-DURABLE GOODS	**(380,300)**	**47.6%**
Chemical Industry	93,800	11.7%
Apparel & Needle	73,900	9.2%
Food & Kindred	64,700	8.1%
Textile-Mill Products	28,400	3.6%
Printing, Publishing	33,900	4.2%
Paper & Products	31,100	3.9%
Rubber Products	31,400	3.9%
Petroleum & Coal	11,000	1.4%
Leather Industry	10,600	1.3%
Tobacco Mfg.	1,500	0.2%

Source: New Jersey Department of Labor and Industry, Division of Employment Security, Bureau of Research and Statistics, Vital Statistics on New Jersey's Employment (July, 1963), (Trenton, The Department. April. 1964).



THERE ARE OVER 4 MILLION PEOPLE IN NEW JERSEY'S EIGHT NORTHEASTERN COUNTIES

of Bergen, Essex, Hudson, Middlesex, Morris, Passaic, Somerset and Union. This area ranks fifth behind New York, Los Angeles, Chicago and Philadelphia in buying power of all metropolitan markets in the country. The greater Newark area is the fourth ranking industrial area in the nation in terms of value added by manufacture.

There are more retail sales here than in anyone of 38 states and, though only 50 miles long and 35 miles wide, it has the second highest concentration of people in the United States. New York City is first.

Five of New Jersey's six cities with populations greater than 100,000 experienced population decreases in the last decade—Trenton, 10.8%; Jersey City, 7.7%; Newark 7.7%; Camden 5.9% and Elizabeth, 4.5%. (Paterson, New Jersey's sixth city with over 100,000 inhabitants, experienced a 3.1% population increase in the last decade).

One out of every six pupils in public schools in New Jersey attends school in six of the older cities: Newark, Paterson, Jersey City, Camden, Elizabeth and Trenton. These are in addition to other thousands who attend school in smaller older cities. A recent report stated:

Many families with crippling educational and economic disadvantages live in these cities. Many adults in this group have had less than five years of schooling, including the more than 90,000 who, in 1960, had never attended school. Their income level is low and the expectations of their children are also frequently low. Regrettably, the school experience of these children too often fails to raise their low expectations.[1]

These disadvantaged youth become the school drop-out or potential drop-out. Lacking vocational training or work experience and meaningful, job-related general education, they join the ranks of the unemployed and drift into delinquency. Their lives become ghettos of despair.

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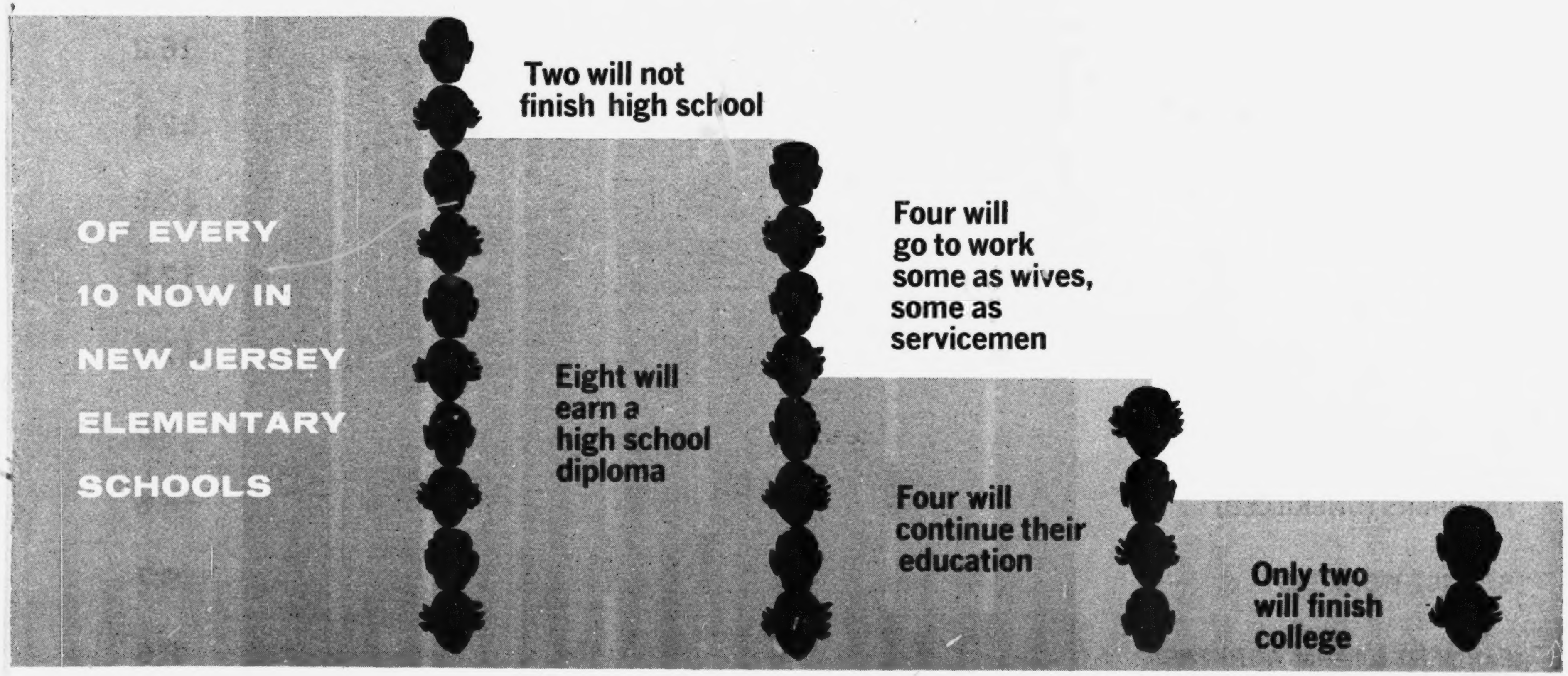
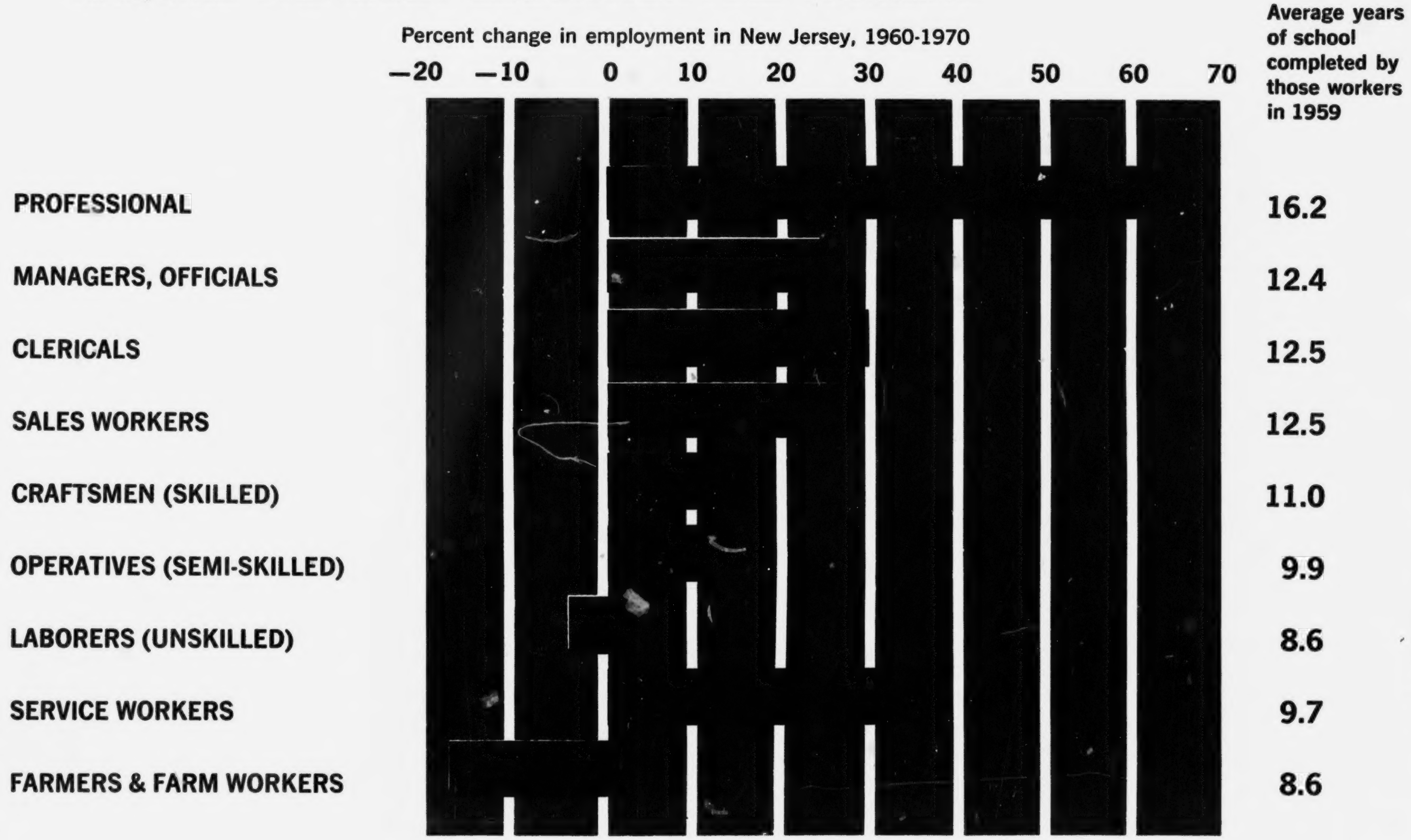
[1] John K. Norton, *Financing the Kinds of Public Schools New Jersey Needs,* (Washington, D.C., National Committee for Support of the Public Schools, 1964), p. 10.

BY 1970

SCHOOLS WILL ENROLL AND PREPARE 1-1/2 MILLION YOUNGSTERS FOR THE CHALLENGING DECADE AHEAD



THE MOST RAPIDLY EXPANDING OCCUPATIONS REQUIRE THE MOST EDUCATION AND TRAINING



High school youth preparing for work in New Jersey today...

High school youth enrolled in public vocational-technical education, 1962-63

FEDERALLY REIMBURSED:

Agriculture	1,270
Distributive occupations	619
Homemaking	3,095
Practical Nursing	40
Trades and Industry	6,491
Technician Training	829
	12,344

NON-REIMBURSED:

Business occupations	217,885
General home economics	145,156
Industrial arts	174,159
	537,200

PUPIL ENROLLMENTS IN NEW JERSEY PUBLIC SCHOOLS BY COUNTIES AND TYPE OF SCHOOL SEPTEMBER 30, 1962

	Type of School				
County (1)	Elementary (2)	Approved Junior High School (3)	High School (4)	Vocational High or Trade School (5)	Total (6)
Atlantic	20,794	368	7,191		28,353
Bergen	89,819	14,536	42,585	687	147,627
Burlington	36,767	2,003	11,485		50,255
Camden	49,557	4,340	19,989	484	74,370
Cape May	5,182	115	2,765		8,062
Cumberland	15,712	3,057	5,099		23,868
Essex	102,560	16,043	36,056	2,727	157,386
Gloucester	21,581	847	10,181		32,609
Hudson	53,689	2,082	21,724		77,495
Hunterdon	9,356		3,548		12,904
Mercer	28,354	8,127	9,506	246	46,233
Middlesex	66,397	8,857	22,500	1,016	98,770
Monmouth	55,427		19,959	76	75,462
Morris	42,265	997	15,934	164	59,360
Ocean	18,937	920	7,179		27,036
Passaic	47,308	6,689	17,588	625	72,210
Salem	10,685		3,484		14,169
Somerset	23,127		10,269		33,396
Sussex	9,240		10,269		12,512
Union	58,709	14,318	24,110	618	97,755
Warren	9,986		3,550		13,536
Total	775,452	83,299	297,974	6,643	1,163,368

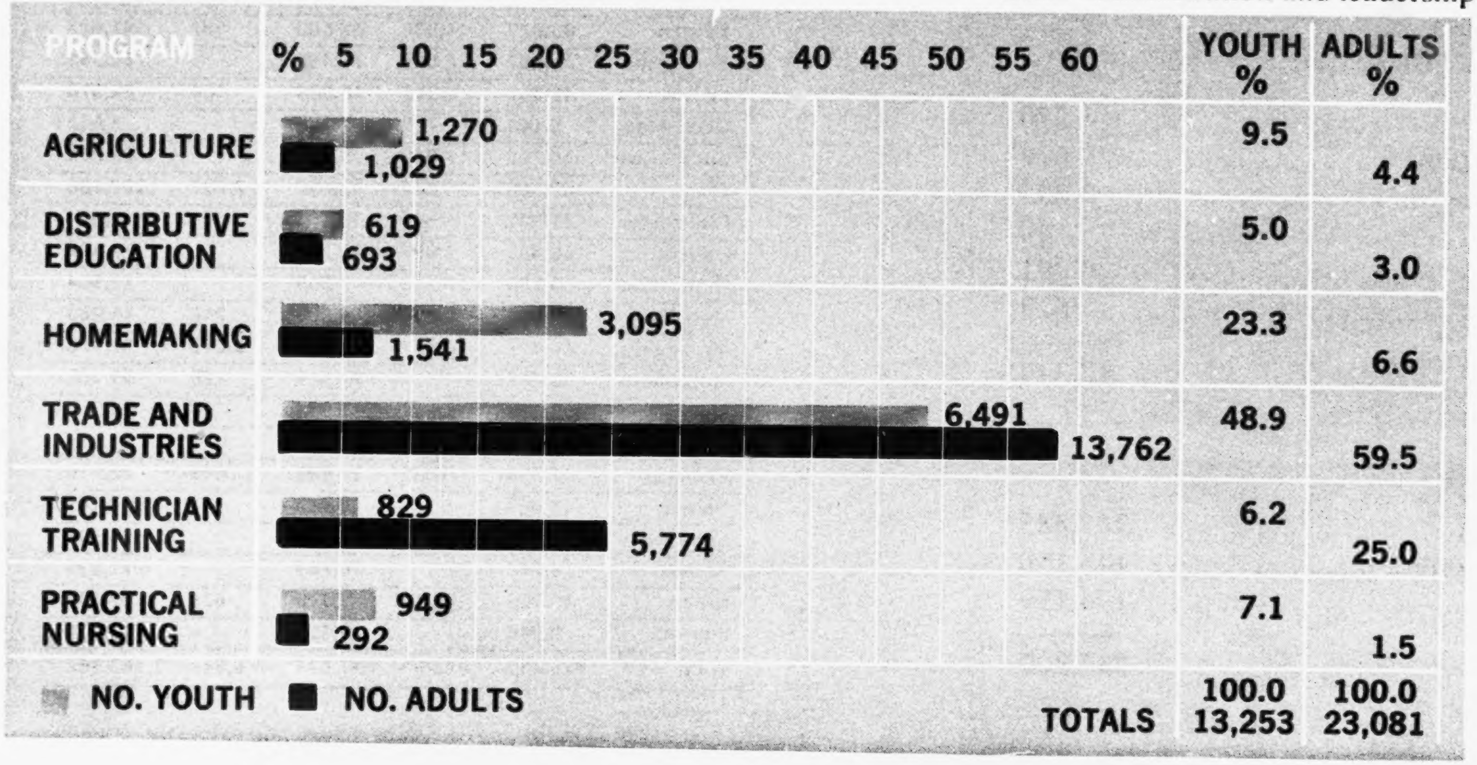
Since 1917, Federal Legislation has helped our Public Schools Prepare People for Jobs . . . In 1962-63 in New Jersey, these laws

- Benefit 36,344 Students (12,344 high school youth and 24,000 adults)
- In 92 school districts —
- Support programs at Rutgers, the State University and Montclair State College
- In a $5 million Local-State-Federal program

Vocational Education Enrollments

The new Vocational Education Act of 1963 authorizes the allotment of $12.7 million federal dollars to New Jersey on a 50-50 matching basis for:

- area vocational school facilities
- teacher training and supervision
- special programs
- program evaluation
- instructional materials
- research
- State administration and leadership

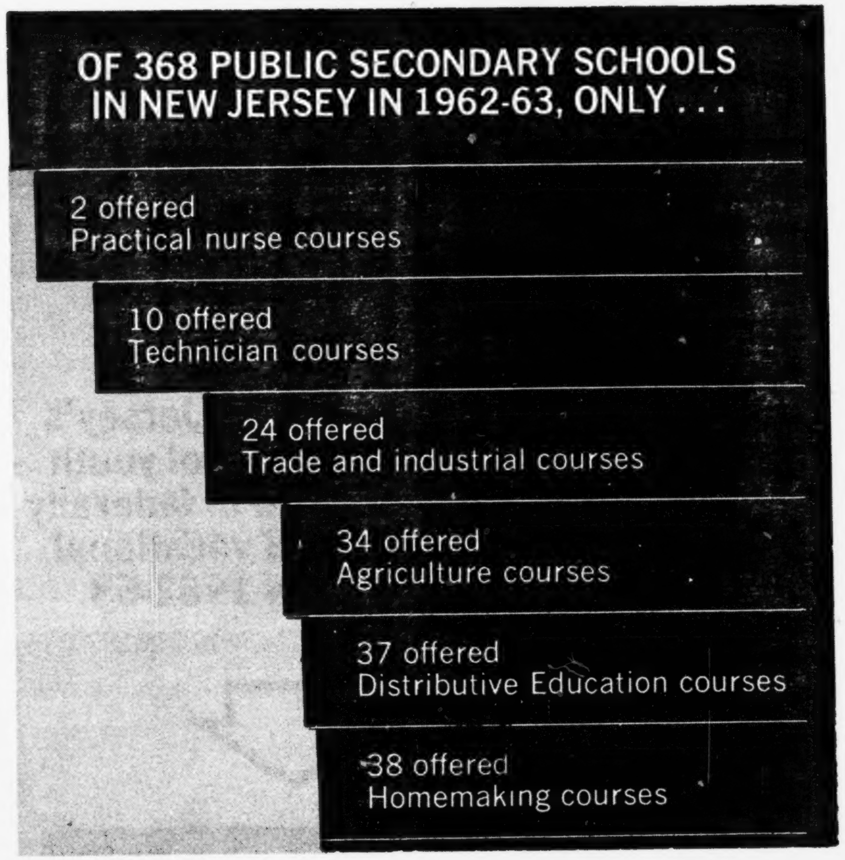


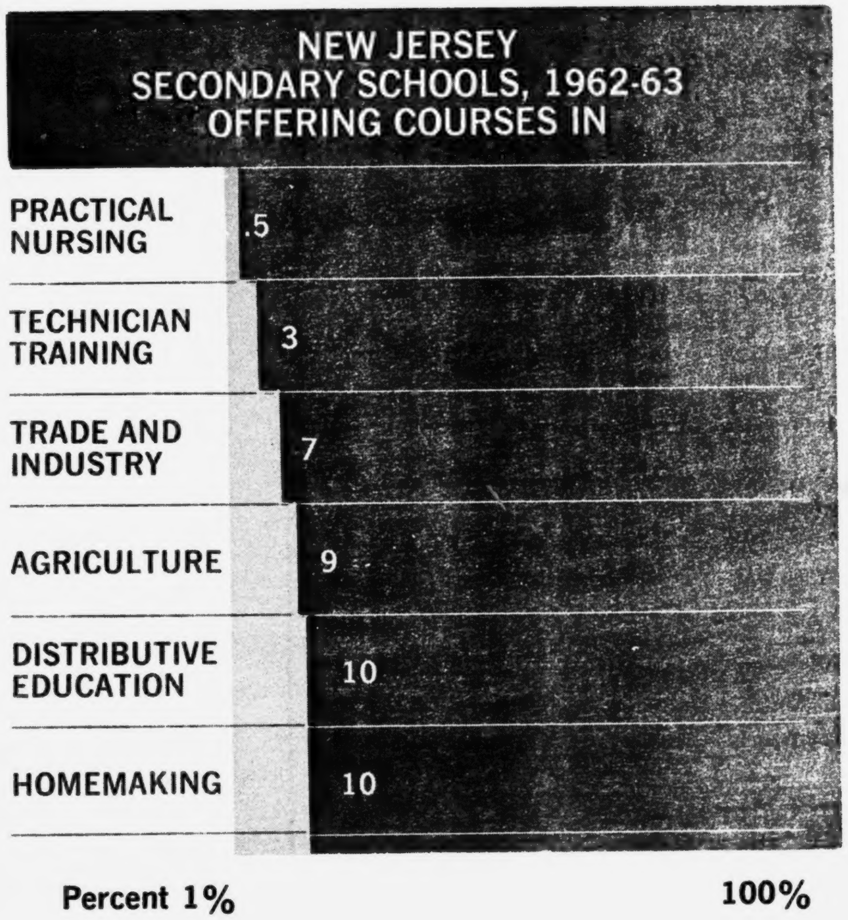
1962-63
investment in
vocational
education
in New Jersey

Local	$2,436,012
State	$1,407,177
Federal	$1,185,865

THE COMMITTEE REPORTS . . .

Vocational education is not available in enough schools



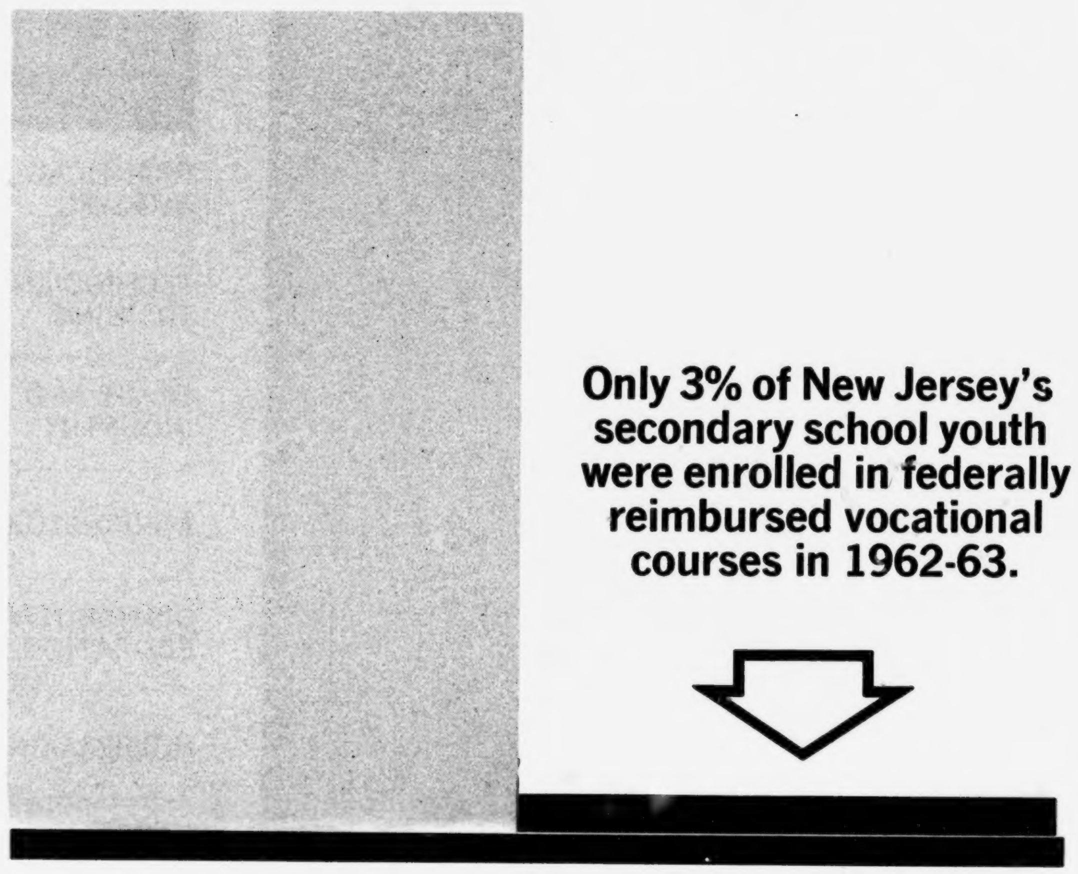


THE COMMITTEE REPORTS . . .

vocational education is not available to all who need it

Of the New Jersey public high school graduates in 1963:

39.3%	entered college
9.7%	went on to other advanced schooling
2.3%	enrolled in post-graduate secondary schooling
36.2%	entered employment
6.4%	entered the armed forces
6.1%	miscellaneous (married, deceased, not in school or employed)



Only 3% of New Jersey's secondary school youth were enrolled in federally reimbursed vocational courses in 1962-63.

THE COMMITTEE HOLDS...

New Jersey Needs A Massive Effort In Vocational Education Today

In a changing world of work vocational education must . . .

- Offer training opportunities to the 60% of New Jersey youth who do not go to college.
- Expand vocational-technical training programs consistent with employment possibilities and New Jersey's economic needs.
- Provide programs with a solid occupational foundation, built on a knowledge of present job opportunities and projected future needs.
- Make training opportunities equally available to all regardless of race, sex, or place of residence.

Vocational education in New Jersey today demands a re-dedication to the fact that training for work is an integral part of education. It involves the whole school program. It applies to girls as well as boys. It serves the slow learner, the handicapped learner, the reluctant learner and the potential drop-out. It requires buildings and facilities that promote the dignity of work and enhance the status of the blue collar worker. It invites sound vocational counseling and work experiences. It needs more teachers as outstanding as the present staff whose excellent work is based on deep dedication and high ideals. Finally, meeting the needs of vocational education in New Jersey requires administrative leadership that will settle for nothing less than opportunities for the full development of youth's occupational competencies and New Jersey's economic and social well-being.

The Committee's AGENDA for ACTION

A breakthrough is needed in vocational education, for the secondary school to provide occupational preparation for employment-bound youth.

This breakthrough must be spearheaded by a broader, more inclusive concept of occupational training, based on the dignity of work and the significance of the worker's contribution to the common weal. This concept would provide programs for high school youth with academic, socio-economic or other handicaps that prevent them from succeeding in the regular vocational education program. The concept would also provide residence opportunity for participation in specialized programs available only in another part of the state. The concept would envision the secondary school as a base to which those who have left high school may return for making-up or strengthening academic or occupational skills.

This breakthrough will occur only if the State Board of Education can make this concept a reality. The entire State must be inspired by this concept and stimulated to respond to the needs of youth and society. The State Board of Education must bear the full responsibility for this leadership. That the program as a whole attain the standards of the Committee and thereby realize the objectives of vocational education, the Committee recommends that·

1. The Department of Education clarify and unify its position so that its divisions may present a common front in approaching the problem of vocational and occupational training for all New Jersey youth.

2. The State Department of Education be adequately staffed and financed in order to render effective leadership to assist local, regional and county areas in determining their vocational and occupational needs and in carrying out effective programming for the development of facilities, personnel, and curriculum construction to satisfy these needs.

3. a. The State Department of Education accept the responsibility for the promotion in all parts of the State of a movement to provide whatever vocational training that is needed to serve the demands for skilled and semi-skilled workers. This could be initiated by the formation of committees and study groups composed of interested and capable citizens, representatives of agriculture, business, labor, industry, education and government. The State Department should then participate as active consultants and guides concerning organizations, finances, buildings, and curricular programs.

   b. County Boards of Education accept the responsibility for providing on a county basis whatever vocational training that is needed to serve the demands for skilled and semi-skilled workers. As in the case of the State Department of Education, this could be initiated by the formation of committees and study groups composed of interested and capable citizens, representatives of agriculture, business, labor, industry, education and government.

c. Local Boards of Education accept the responsibility for providing locally whatever vocational training that is needed to serve the demands for skilled and semi-skilled workers. As in the case of the State Department of Education and County Boards of Education, this could be initiated by the formation of committees and study groups composed of interested and capable citizens, representatives of agriculture, business, labor, industry, education and government.

4. The State Department of Education establish a clearinghouse of information to enhance the status of vocational education by proper recognition of vocational needs of youth and employment needs of business and industry. Information promulgated to be based on continuing statewide research studies of occupational needs and frequent, periodic analyses by local and county boards of education and their staffs to determine vocational needs of youth in order that appropriate programs and facilities may be provided, thereby promoting the status of vocational opportunities and employment for youth and industry.

Occupational Preparation is A Duty of Every High School.

More and more occupations require skills and specialized knowledge for which there must be prior training. The New Jersey labor market is closing to the unskilled laborer. And yet the common cause of unemployment among New Jersey youth is lack of a salable skill. Only a small minority of New Jersey employment-bound youth are being properly equipped to earn a living. To prepare youth for citizenship and work is the inescapable duty of public education. As far as New Jersey's general high schools are concerned, the vocational portion of this duty is being largely neglected.

That there may be broad expansion of current programs, the Committee recommends that:

5. The present vocational programs be extended to:
    a. encourage more programs in the various vocational and technical areas as schools grow and expand;
    b. provide more programs for girls in industrial and service occupations;
    c. expand service trades training where demands are not being met;
    d. expand cooperative work-study programs in all secondary schools.
6. Present industrial arts and general home economics programs be extended to include occupational outcomes.

7. Programs to be added to those now in operation be instituted on the basis of surveyed employment needs of business and industry. Advisory committee composed of agricultural, business, industrial, labor and educational representatives should constantly be involved in the revision of the old, as well as the addition of new, programs.

For youth enrolled in secondary schools of a thousand or less pupils, the Committe recommends that:

8. For the small high school particularly, a broad scale of cooperative work-study programs be considered in some of the following areas:
   a. diversified occupations programs, using the broadest possible interpretation. Programs should be developed in this area for students whose abilities make success in skilled trades unlikely;
   b. business, clerical, and secretarial programs, leaving the way open for now unforeseeable technical advances in these fields;
   c. distributive education programs with a view to making these programs more attractive to the smaller high school;
   d. trade and industrial programs;
   e. agricultural and horticultural programs.

That every youth may have the opportunity to attain occupational proficiencies in keeping with his abilities and interests, the Committee recommends that:

9. If a local school district does not provide opportunities for public vocational education, the local district support the attendance of a student by tuition payment to any city, county, or regional public school which has the program desired and which will accept him. In those counties in which the Board of Chosen Freeholders determine that such vocational education shall be fully tax-supported by the county as a whole, the student from the county may attend tuition free.

Youth Need A More Up-to-Date, Realistic Education Which Emphasizes Salable Skills And Related Employment Information.

Wise vocational choices and adjustments require the provision of adequate occupational information and guidance.

To promote and enhance the occupational information and guidance services, the Committee recommends that:

10. A balance be achieved in secondary school guidance programs between the academic, college-oriented and the occupational, job-oriented, so that counsellors are as equally competent and sensitive to the need for occupational and academic counselling.

Teacher and leadership programs must be improved and enlarged. The higher educational institutions of New Jersey, particularly the State Colleges and the State University, must provide more generously for the professional growth of vocational and technical teachers and supervisors. To this end the Committee recommends that:

11. There be a development of new programs, and an expansion of existing programs, to prepare teachers and other professional personnel necessary to meet the occupational training programs recommended by this Committee as essential to meeting the needs of vocational education in New Jersey.

Vocational Education is a Sound Investment in People.

Since the 1950's New Jersey has been marked by technological advance, urbanization, population mobility and increase, larger labor force and more women in the work force. The intensity of these conditions poses social and economic problems that challenge our ingenuity and intelligence. Only a rising level of general education and occupational competence will provide the thrust to meet this challenge.

It is on education, which raises personal and societal levels of living and enhances New Jersey's place among the States and Nations, that the future rests.

To this end, the Committee recommends:

12. Legislation be enacted to encourage the establishment, expansion, and improvement of public occupational, vocational, and technical education in regular secondary schools, in local, county, regional, or area vocational schools, in technical institutes, and in county community colleges so as to develop adequate preemployment, retraining and upgrading programs for all youth and adults.

13. Legislation be enacted to provide assistance for vocational programs in all types of public schools, including local district vocational schools, county vocational schools, regional high schools, area vocational schools, technical institutes, receiving district high schools, and county community colleges on an equitable basis.

14. a. The State Board of Education set up minimum standards and requirements for approval and reimbursement of vocational programs and supervise such programs to insure that the aims and objectives of this State legislation are carried out. Such regulations should be broadly drawn up to cover all areas of education which prepare directly for the employment of youth.

    b. Industrial arts and home economics programs receive State aid equally with programs which meet State and Federal standards of vocational education.

15. Federal vocational funds be disbursed on a State matching basis through the adoption of an extension of Section 18:23-19 of the Revised Statutes of the State of New Jersey.

16. Vocational day school programs which qualify under provisions of the State Plan for vocational-technical

education be reimbursed for operating expenses at the rate of $2,000 per full-time vocational-technical instructor.

17. A formula ratio for operating expenses and building aid be adopted for vocational schools organized on a county basis, in the same manner as provided other school districts.

18. Construction for vocational facilities be financed when it qualifies with 50 percent Federal and/or State funds, and 50 percent local funds.

19. Construction aid for vocational facilities be given on an installment basis to meet school bond obligations for such construction. This to be set up in a manner like the present distribution of building aid for general school construction. County and area vocational schools to qualify for construction aid also.

20. Maximum State aid for vocational-technical evening school programs be increased from $10,000 to $20,000.

Committee to study vocational education in New Jersey

December 1963-June 1964

Chairman:

Dr. Norman A. Gathany
Assistant Superintendent of Schools
Bridgewater-Raritan School District
Raritan

Secretary:

Dr. Charles R. Kelley, Director,
Graduate and Professional Education
State Department of Education
Trenton

Clerical Staff:

Mrs. Alma Burkus
Mrs. Ann Price
Mrs. Barbara Reader
Mrs. Betty St. John

Mr. Phillip Alampi
Secretary of Agriculture
Trenton

Dr. Richard T. Beck
Superintendent of Schools
Trenton

Mr. Henry D. Bourhill,
Director
Paterson Vocational-Technical High School
Paterson

Dr. Burr D. Coe, Director
Middlesex County Vocational and Technical High Schools
New Brunswick

Mr. Gordon Cunnanne
Personnel Director
Continental Copper and Steel Industries, Inc.
Hillside

Dr. Warren M. Davis,
Superintendent
Union County Regional High School District No. 1
Berkely Heights

Mr. Herbert C. Donaghay,
Director
Salem County Vocational-Technical Institute
Penns Grove

Mr. John E. Dwyer
Superintendent of Schools
Elizabeth

Dr. Charles I. Dyer, Principal
Memorial Junior High School
Vineland

Mr. Thomas F. Gaynor,
Hoboken High School
Hoboken

Dr. John B. Geissinger
Superintendents of Schools
Tenafly

Mr. Albion G. Hart
Superintendent of Schools
Atlantic City

Dr. Carl W. Hassel
Superintendent of Schools
Moorestown

Dr. Edward F. Kennelly
Superintendent of Schools
Newark

Mr. Al Loewenthal
Assistant to the President
International Union of Electrical Workers, District 3
Newark

Mrs. Ruth H. Mancuso,
President
State Federation of District Board of Education
Glassboro

Mr. Kenneth E. Michael,
Principal
Princeton High School
Princeton

Dr. George Morgenroth,
Director
Essex County Vocational Schools
Newark

Mr. P. Joseph Quinn,
President
Association of Boards of Education of County Vocational Schools
Newark

Mr. Raleigh Rajoppi
International Brotherhood of Carpenters and Joiners
Springfield

Mr. Ernest Schreiber,
President
Camden County Vocational Board
Pennsauken

Mr. Earl Sherrick, Personnel Manager
Anchor Hocking Glass Corp.
Salem

Mr. Warren H. Simmons
Vice President for Personnel
Bamberger's
Newark

Mr. Peter Valentenuzzi
International Association of Machinists
North Plainfield

Mr. Jack Volosin
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carries a higher
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NEW JERSEY DEPARTMENT OF EDUCATION
225 WEST STATE STREET ■ P.O. BOX 2019 ■ TRENTON, N.J. 08625

VT 001 688
Regulations Governing the Establishment and Operation of the Program of Industrial and Technical Education as Authorized by the 1961 General Assembly.

South Carolina General Assembly, Columbia
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 2Dec64 9p.

*TECHNICAL EDUCATION; *EDUCATIONAL LEGISLATION; ADVISORY COMMITTEES; *VOCATIONAL EDUCATION; ADMINISTRATOR RESPONSIBILITY; *STATE STANDARDS; SCHOOL LOCATION; SCHOOL FUNDS; *TECHNICAL OCCUPATIONS
SOUTH CAROLINA

Instruction in technical education in South Carolina is designed to prepare individuals for entering into or progressing in their present employment in industrial or technical pursuits or designed to improve conditions which result in improved citizenship. Listed are: (1) types of instruction, (2) types of schools, (3) administrative responsibilities, (4) provisions, criteria, and procedure for determining location of schools, (5) eligibility of students, (6) consultative services, (7) length of term and attendance day for technical schools, (8) fiscal procedures, and (9) qualitative standards. An appendix contains specific regulations concerning area committees for technical education centers. (MS)

VT001688

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REGULATIONS

.....GOVERNING THE ESTABLISHMENT AND
OPERATION OF THE PROGRAM OF INDUSTRIAL
AND TECHNICAL EDUCATION AS AUTHORIZED
BY THE 1961 GENERAL ASSEMBLY.

ADOPTED.....September 13, 1961
AMENDED.... November 28, 1962
AMENDED. ...December 2, 1964

VT 01688

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

Adopted September 13, 1961
Amended November 28, 1962

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REGULATIONS GOVERNING THE ESTABLISHMENT AND OPERATION OF THE PROGRAM OF INDUSTRIAL AND TECHNICAL EDUCATION AS AUTHORIZED BY THE 1961 GENERAL ASSEMBLY.

I. Purpose and Types of Programs to be Offered

The Advisory Committee for Technical Education shall assist in offering instruction in selected communities throughout South Carolina. The instruction shall be designed to prepare individuals for entering into or progressing in employment in industrial and technical pursuits or designed to improve conditions which result in improved citizenship.

A. Types of Instruction

This instruction shall include but not be limited to the following:

1. Machine Operators. When specific job opportunities are available, machine operators may be trained. This type training shall be coordinated with South Carolina's industrial expansion efforts or with the needs of established industries. Instruction shall be designed to assist our citizens to gain the skills necessary for entering employment and shall be limited to that point where skill development ends and speed development begins. These programs shall terminate when known employment needs are met.

2. Technicians. The technician curriculums are designed primarily for the high school graduate to meet the increasing demand for semi-professional workers caused by the rapid development in modern industry. The highly skilled nature of the technician occupation requires that he be skilled in the use of tools and equipment in addition to a working knowledge of science, mathematics, report writing contracts and specifications, human relations and economics. The curriculums shall be structured to meet these needs.

3. Craftsmen. All trade courses offered shall emphasize the basic manipulative and mental skills respective to the trade.

4. Updating Classes for Employed Adults. To meet the increasing educational requirements of employed men and women, instruction shall be offered to keep them abreast with technological changes in their field of work. This instruction shall not be limited to technical and supervisory training, but shall include courses in the general fields of learning where additional general knowledge is a prerequisite to continued job success. Courses in the basic fields of learning may also be offered to qualify students for the admission standards required to enter technical courses. Primary emphasis

shall be given to this group who constitute the masses of our population and their development is the major hope for an improved economy, improved social conditions and improved citizenship in general.

5. College Credit Courses. No state assistance shall be made available by the Advisory Committee for transfer credit courses. Schools are encouraged, however, to enter into contracts with existing institutions of higher learning to offer these courses when there is an expressed desire on the part of sufficient citizens to finance this instruction on a tuition basis. Administrative organizations and facilities of the school shall be made available but standards of the institution of higher learning offering instruction shall be observed.

B. Types of Schools

The instruction shall be offered in the following types of schools:

1. Special Schools. To implement the "crash" program provided by the General Assembly, any community in South Carolina may request state aid through its legislative delegation or its board of education when there is a peak need for trained personnel caused by industrial development or expansion which creates new job opportunities. The function of this program shall be to insure local citizens the opportunity to qualify for available jobs. Schools may be operated in temporary quarters and shall be structured to terminate when known needs are met. The state may provide equipment, salaries and other operating costs according to the same formula as provided for the permanent type technical schools.

2. Technical Schools. To provide the needs of the State for technical education, there shall be created "Technical Education Centers." These centers shall provide for the training of technicians and others as defined in Section 1 of these Regulations. Instruction shall be offered in specially designed buildings which will meet the standards prescribed by the Committee. These schools shall be named the ____________________ Technical
(name of urban center)
Education Center or the local Area Committee may submit a request to institute a name for the center for approval by the State Committee for Technical Education.

II. Administrative Relationships and Responsibilities

A. To be eligible for state assistance, schools shall have a plan for adequate local supervision. To safeguard emphasis and to meet changing needs, each school shall have an Area Committee made up of persons who know the industrail and technical needs of industry and who are representative of the general area served by the school. This committee shall cooperate with the local boards of education in the area served. The responsibilities and method of appointment of the Area Committee are defined in Appendix "A".

B. The responsibility for initiating a request for establishment of a school shall rest with the Legislative Delegation and the Area Committee.

III. Provisions, Criteria and Procedures for Determining Location of Schools

The Advisory Committee for Technical Education shall have final authority as to the number and location of schools approved. In general, the following conditions shall apply:

Action of the legislature in creating this instructional program requires that it be structured to serve the entire state. Specific criteria for schools by types are as follows:

A. Special Schools. Any community which has 20 or more job opportunities for which local residents could qualify if properly trained may apply for state assistance from funds allocated. Suitable equipment in possession of the Committee may be transferred to assist the community needs. Equipment and other assistance may be furnished locally if available.

B. Technical Schools (Permanent). The following criteria shall be observed in the initial approval of any school:

1. Evidence of need as shown by a survey. Schools approved must show a continuing need of 15 or more persons each year in a highly skilled occupational area served by a curriculum. A school must show need of four or more curriculums in order to be sufficiently large enough to warrant administrative cost and adequate counseling. (See Appendix "B" for Need Survey example

2. Evidence of financial support. Local sources must pledge to provide suitable buildings to meet the standards prescribed by the Advisory Committee.

3. Evidence of interest on the part of existing industry. Conditions are more favorable for success if industrialists are willing to give of their time in the development of curriculums which reflect local needs, yet adhere to statewide standards.

   This will also insure their familiarization of the school, acceptance of the graduates, and encouragement of their employees to return to school at off hours for additional skills and to keep abreast with changes in technology. Communities may wish to submit briefs from industries to aid the State Committee in selecting of school locations. Surveys should be under the direction of appointed Area Committees made up of persons who know the community needs.

4. Evidence of student interest as a guide to applicants. As a guide to applicants, the area served should be graduating 4000 or more students from the secondary schools each year and the Employment Security Commission surveys should show an ample supply of labor available for training. One thousand persons available for work for incoming or expanding industries should be ample, although the number is not required.

C. In applying for State assistance, the Area Committee shall:

1. Submit to the Advisory Committee for Technical Education an application for a school duly signed by the Chairman of the committee and the Chairman of the Legislative Delegation.

2. Give evidence of need for this program by certifying to the Advisory Committee for Technical Education the needs as determined by an occupational survey. Included with the evidence of need may be statements indicating an interest on the part of existing industry.

IV. Eligibility of Students

A. Students shall be not less than sixteen years of age, and shall have completed those courses and tests considered prerequisite to the instruction desired. In addition, students may be required to meet other determining factors which may be prescribed to insure the student's ability to meet job requirements.

B. Students living outside the area which furnished funds for capital outlay requirements may be enrolled through arrangements with the Area Committee subject to their acceptance by the Committee. Area Committees shall have the authority to require of these students reimbursement of their per-student share of the cost--if such is required.

C. It shall be the responsibility of the Area Committee to see that the criteria for student admission are consistently observed.

V. Consultative Services

A. The State Superintendent of Education will be requested to provide consultative services designed to improve the effectiveness of the program. Classes within the specialized area of vocational education or the general fields of learning will submit such reports and records as are required of other state assisted programs operating within the framework of public education.

B. Institutions of higher learning may be requested to also provide consultative services designed to improve the teaching-learning process. The Advisory Committee shall enter into contract with such institutions to provide in-service programs of teacher education. Reports and records as required by these institutions and by the Committee shall be submitted.

C. The Advisory Committee for Technical Education shall provide the highly specialized consultative services which involve program coordination and direction. Included in these services will be the engineering services necessary to plan for personnel requirements of new and expanding industry.

VI. Length of Term and Attendance Day for Technical Schools

A. Classes which offer pre-employment instruction for adults and out-of-school youth shall operate not less than six hours and not more than forty hours weekly. The length of these courses will vary with the skills demanded by industry for initial employment and shall be determined by the local board.

B. Effort shall be made to operate the technical school on a calendar concurrent with that of the public schools in the community. The school, however, shall operate a minimum of 48 weeks per year, observing holidays regularly observed by the public schools during the normal school year.

C. The hours of operation shall be determined by the local committee provided assigned full-time teachers reimbursed from state funds shall work not less than eight hours per day. Included in the eight hour work day shall be one hour for preparation and no teacher may schedule classes during the period allotted for this purpose.

D. Part-time or hourly instruction may be offered day or night. Reimbursement for these part-time teachers shall be made under the regulations established by the Advisory Committee for Technical Education.

VII. Fiscal Procedures

The Committee shall reimburse on a monthly or quarterly basis according to the regular reimbursement practices established by the State.

A. State funds shall be provided for full reimbursement of Directors, teachers and supervisors according to the schedule established by the Advisory Committee. Local committees may supplement these salaries from local sources.

B. Clerical and janitorial salaries shall be reimbursed 50% by state assistance.

C. State funds shall be used to purchase, install and maintain all equipment. Equipment thus purchased or donated for state maintenance shall become the property of the State of South Carolina. Final authority for location of disposition of all equipment, training aids and material shall rest with the Advisory Committee. Equipment will be transferred by the Advisory Committee to the place where it will receive maximum use as an instructional aid. This flexibility shall permit keeping course offerings abreast with area needs.

D. Local funds shall provide for the erection and maintenance of the building. No State funds shall be used for building construction. Federal matching funds and/or private funds may be used with the advice and consent of the State Committee for Technical Education and the State Budget and Control Board.

E. Fifty per cent of plant operational costs including heat and power shall be provided by the State through the Advisory Committee. Local funds are expected to assist in these costs.

VIII. Qualitative Standards

Each course in the Technical Education Center shall conform to the statewide standards as to content and emphasis in areas where job requirements are similar. The State Advisory Committee for Technical Education shall set minimum standards and authorize issuance of appropriate certificates to individuals who satisfactorily meet these standards.

APPENDIX

A. Powers and Duties and Method of Appointment of Area Committees for Technical Education Centers

1. Powers and Duties of Area Committees

The Committee shall be responsible for the development and implementation of an adequate program of technical education as provided by the General Assembly through the Technical Education Centers. The Committee in carrying out this function shall cooperate with all school districts and all county, state and federal agencies designed to further technical education. The Committee is empowered to hire such personnel and enter into such contracts, and make such rules and regulations as may be necessary to carry out the functions of the office when local funds are involved. When state funds are used, the Area Committees shall operate within the framework of all rules and regulations of the State Committee for Technical Education.

2. Records and Accounting of Fiscal Affairs

The Committee shall receive and administer the funds received by it from all sources and make its local accounting annually in the same manner as school districts. The Committee shall furnish to the State Board of Education and the State Advisory Committee for Technical Education such reports and information as shall be essential to the operation of this program. The Committee shall submit a budget to the Legislative Delegation on or before March first of each year.

3. Appointment of Committees

The Area Committee shall be composed of 9 members selected from citizens in the area served by the Center. The area shall include but not be limited to men who know the industrial and technical needs of the area served. Efforts shall be made to appoint a representative membership from the school districts in the area served. Members shall be appointed for a term of four years. However, initial appointment of the members shall be as follows:

3 members for a term of four years
3 members for a term of three years, and
3 members for a term of two years.

The Committee shall elect a chairman and other such officers from its membership as it deems necessary. The committee shall be recommended by a majority of the Legislative Delegation including the Senator of the respective area and shall be appointed by the Governor. Provided, that the original appointees shall among themselves determine by lot which are to receive appointment for four years, which are to receive appointment for three years and which are to receive appointment for two years.

Thereafter, all appointments shall be for a period of four years.

B. Need Survey Example

The electronics-electrical field may be used as an example. There should normally be an employment of about 150 craftsmen or technicians in this occupational field within the occupational area served to insure continuing job opportunities for graduates. (The school would turn out more students than 15 per year in this area, but industrial development caused by an improved business climate should absorb the oversupply). Included in the electrical-electronics would be job classifications such as: radio-television repair, industrial electronics technician, electrial design draftsman, solenoid technician, electric motor repairman, electric motor test technician, instrumentations technician, test technician for guidance systems, etc. The example illustrated is one occupational field and there should be four or more for approval.

VT 001 695
Program Practices in Connecticut Vocational-Technical Schools. Bull-30.

Connecticut State Dept. of Education, Hartford. Div. of Vocational Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jul65 48p.

*VOCATIONAL EDUCATION; *TECHNICAL EDUCATION; *STATE PROGRAMS; PROGRAM ADMINISTRATION; *ADULT EDUCATION; INSTRUCTIONAL PROGRAMS; *SECONDARY EDUCATION
CONNECTICUT

The Connecticut vocational-technical school program consists of 14 regional schools offering essentially a minimum 3-year course beyond the ninth grade as well as adult and post-secondary courses. The information presented ranges from the instructional program to student attire. The main sections are as follows: (1) program of Connecticut vocational-technical education (discusses philosophy of vocational education, out-of-state student tuition, and institute evening program), (2) adult services (discusses foreman training and extention courses), (3) instructional program (discusses school calendar schedule, admission practices, and expulsion), (4) the instructional materials development program (discusses program study committee and curriculum development program), (5) professional staff (discusses staff promotions, teacher certification, and substitute teachers), and (6) general practices (discusses student insurance, fire drills, and emergencies). (SL)

VT001695

ED033 237

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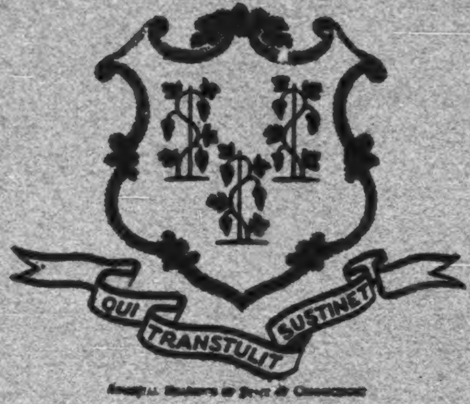

PROGRAM PRACTICES

IN

CONNECTICUT

VOCATIONAL-TECHNICAL

SCHOOLS

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Bureau of Vocational-Technical Schools
State Department of Education
Hartford, Connecticut
Revised - July 1965

VT 01695

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CONNECTICUT STATE DEPARTMENT OF EDUCATION
Bureau of Vocational-Technical Schools
Hartford

Program of the Connecticut Vocational-Technical Schools

Connecticut is primarily an industrial state. Its most valuable asset is the skill of its people which must be maintained for the health of the economy. Vocational-Technical Education is one of the essential means to this end.

Trade and Industrial Education is designed to serve both the educational and economic needs of the state. It serves youth with a combined secondary school program of trade-training and general education aimed at the preparation of citizens who will be well informed and well adjusted.

It serves adults by offering short term training for the improvement of skills, or for the preparation for new jobs as opportunities occur. To industry, it offers special in-service training, as well as a supply of young craftsmen to replace the normal losses in the various trade fields. All such training is offered free of charge as a part of public education in the state.

In Connecticut, Trade and Industrial Education is a statewide program which is directly under the control of the State Board of Education. Planned on a regional basis, the 14 state operated schools are strategically located to serve the state most effectively and economically.

Transportation is provided students under 21 years of age in accordance with state law which requires that reasonable and necessary transportation be furnished when there is no vocational-technical school in the town in which the student resides. The law also provides that a specific sum may be paid for maintenance if the town elects to pay this in lien of transportation.

Philosophy of Vocational Education in Connecticut

The underlying purpose of vocational education is to provide programs which prepare the individual for specific areas of occupational life, to upgrade and increase technical knowledge and skill of those already employed and to provide technical and related information in instructional programs to individuals serving apprenticeship in various occupations. Such programs are an integral part of the educational opportunities provided to the citizens of the state and are designed to meet the needs, aptitudes and interests of individuals who desire such programs. In all programs the purpose is to educate as well as to train.

General Principles of Operation

Connecticut's vocational schools are regional secondary schools operated by the State Department of Education. The principal objectives of the schools are the development of good citizenship, a reasonable degree of social competency and a marketable degree of skill.

Essentially a three-year program, the time is divided equally 50% given to skilled trade training and 50% to general and related education. Most schools, however, offer a ninth grade program in which the shop time is primarily a period of exploration for better vocational selection. There are some exceptions to this general pattern where the nature of the course content or specific regulations of other governing factors require an additional year. Examples of such courses are Tool and Die Design; Aircraft Mechanics; Industrial Electronics; Watch, Clock and Instrument Making; and Machine and Tool Drafting.

Trade training is offered on real jobs. Students are given basic training in the use of the tools of their trade, and after sufficient practice, move on to customer work. The necessary trade theory is emphasized along with the skill training.

The related work includes mathematics, science, blueprint reading, sketching and drafting. General science is a required course for all ninth grade pupils. Science for the machine and building trades students includes physics, chemistry, and strength of materials. For other trades, such as the girls' trades, printing and baking the science courses include biology, chemistry, and the science related to these trades. These are free public schools for the residents of Connecticut.

Tuition for Out of State Students

A tuition fee determined annually by the Director of the Bureau of Vocational Education and based on the current per capita cost, is charged to out of State students.

Students from Foreign Countries

Any student from a foreign country, applying for admission to a Connecticut Vocational School, must submit evidence to the school director that he can meet the regular entrance requirements, will be able to do the required work and communicate in English. He must also provide assurance that the necessary costs for all expenses, food, lodging, clothing, school expenses and transportation from and to his home country can be met by the sending agency or his family. The applicant must show that he has been cleared by the immigration service for the period of time he expects to remain in this country as a student. The school director shall submit the application and credentials to the Bureau Chief for review, approval and transmittal to the Commissioner of Education. Each case shall be considered on an individual basis including the possible waiver of out of state tuition charge.

Trade Training (Shop Work)

Trade training in the Connecticut Vocational-Technical schools is organized to provide the learner with a marketable degree of skill and to provide industry with workers who have the basic skills of their trade and the necessary trade knowledge as a foundation from which they can develop with experience into journeymen and supervisors. The organization of the instructional program is such as to teach the learner to care for and use the tools and equipment, to plan and carry out the jobs of the trade, to develop acceptable work habits and attitudes to understand "why" as well as the "how" of jobs and operations, and to appreciate his importance to society as a skilled craftsman.

Trade Theory

The trade theory program explains the why of shop practices and skills and presents trade and technical information to better enable students (a) to analyze and solve shop problems, (b) to produce goods and services of a highly skilled nature, (c) to further growth in the trade and (d) to adjust to occupational change in this nuclear and technological era. The theory program extends the direct experiences of the shop and makes possible a broader understanding of the trade. Trade theory programs insure more efficient use of the instructor's time and provide students with the functional and auxiliary trade information in a highly organized manner.

Blueprint Reading

The blueprint reading program enables a technical school student: (a) to learn the language of blueprints and to visualize and interpret a blueprint so that he may proceed intelligently to produce something according to accepted standards, (b) to interpret and express ideas through understandable sketches and (c) in certain trades to interpret and express ideas through instrumental drawings of an acceptable standard.

The General Education Program

The general education phase of the program is designed for the common needs of all young people and is required of all students regardless of the choice of trade specialization. The four years of English instruction are designed to develop a progressive degree of skill and maturity in the communicative skills with particular attention to oral work. The four-year social studies program aims at the development of the well informed and responsible citizen. The course includes civics, world geography, world problems, U. S. History and Industrial Economics.

Physical Education is a requirement for all four years. Guidance services are provided for all students.

One period each week is allotted to student activities. Each school has its student council and athletic association in which all classes have representation. In addition there is a student congress representing all of the sdhools in matters which are of common concern.

Social activities in schools, such as dances, receptions and picnics are conducted regularly by the student associations.

Mathematics and Science

Mathematics and science are required subjects in Connecticut vocational-technical schools because of the conviction that knowledge of the subject matter and methods of mathematics and science can make the tradesman more competent and resourceful. As the name related mathematics and science implies, these courses are designed to be functional.

The mathematics and science program are thus organized to achieve the following objectives:

(1) To meet the needs of the specific trade area.
(2) To develop in students an understanding of fundamental mathematical and scientific processes and an ability to use them.
(3) To develop in students an ability to think and organize effectively in the changing technology and society of our times.

To achieve these objectives in science, the course is so designed and implemented as to provide the student with many opportunities for first hand learning through classroom and laboratory activities. Furthermore, wherever practicable these laboratory activities are developed around the materials and devices with which the students work in the shops.

Similarly, in mathematics the basic concepts and principles are offered in a logical sequence as needed to achieve the above mentioned criteria. These principles are further implemented by applying them in the solution of trade problems.

Student Counseling (The Guidance Program)

The importance of a sound program of guidance is recognized in vocational-technical school education. The provision of qualified counselors assures the program of all commonly accepted guidance services designed to assist students in making their maximum growth in terms of personal, social, and vocational adjustment.

Selection of procedures are established for students seeking admission which will assure the best possible placement and development of these students.

Another purpose of the guidance program is to promote better public understanding of vocational education, to inform teachers in public schools, parents and pupils of the offerings and opportunities available.

Physical Education

The purpose of physical education in the vocational-technical schools is to provide for all students a program of supervised physical development recognizing individual needs for the attainment of physical conditioning skills and for participation in individual and group sports. Purposes of the physical education program are to develop physical strength and vigor and to improve coordination, endurance, agility, and balance. The program directs student attention to a better understanding and appreciation of regular physical exercise for improvement of general health and correction of postural and body defects.

The physical education program considers of equal importance the need to help students achieve a balanced program including in the development of socially accepted attitudes in group relationships through guided team play. It encourages a continuing interest and enjoyment in healthy physical activities throughout adult life.

Post-High School Education

The Connecticut State Board of Education has approved an experimental program to run for two years, 1963-65, which will encourage high school graduates to enroll in vocational-technical school trade programs.

One experiment will be continued at the Kaynor Technical School, Waterbury and will enroll high school graduates after the regular day schedule. These students will attend from 3:30 to 10:00 p.m. daily and will cover in two years the skilled trade programs in the following fields:

1. Precision Machining
2. Mechanical Drafting and Design

The Prince Technical School in Hartford will also conduct an experiment, but the unique feature of the Hartford experiment will be to identify training stations for high school graduates in the regular day program. There will also be opportunities for high school graduates to pursue courses of less than two years duration.

State Technical Institutes

State Technical Institutes, situated in Hartford, Norwich, Norwalk and Waterbury offer a two year post-high school program leading to the Associate Degree in Applied Science in the areas of chemical, civil, data processing and computer, electrical, electro-mechanical, mechanical and tool technologies. These course offerings prepare students for immediate gainful employment as technicians or engineering aides. A tuition fee of $100 per year is charged, however ten percent of the students of each class in each year may receive scholarships for this amount.

Institute Evening Program

Five year evening programs, consisting of two evenings a week for qualified candidates also leading to the Associate Degree in Applied Science in the same technologies as offered in the day program are offered in the three State Technical Institutes and the twelve extension centers located in the Vocational-Technical schools. A fee of $5.00 per course is charged.

In addition a wide variety of special unit courses are available to students wishing to improve their knowledge in the fields of their employment.

Adult Services of the Bureau of Vocational Education

Apprenticeship and Part-Time Trade Training

Providing related training, (shop mathematics, blueprint reading, science and trade theory) for apprentices learning trade on-the-job is a major vocational program. Few employers are in a position to provide complete training for their apprentices. Trade skills may best be developed on actual jobs in a shop environment, but the related content that is so essential to the present day skilled tradesman requires an organized training program which in most instances becomes the responsibility of the Vocational Education Service. The Bureau of Vocational-Technical Schools organizes and conducts classes for any trade in any location throughout the state where a sufficient number of apprentices may be grouped to make such a class practical.

Adult Extension Courses

The State Department of Education offers to the adult residents of Connecticut a comprehensive program of free even coursew of supplementary, extension and preparatory nature in industrial fields.

Supplementary Trade Courses are offered to those who are seeking to increase the skills and knowledge used in their daily vocations. Applicants are accepted for enrollment in these classes when it is apparent that the instruction received will be of advantage to them in their daily work.

Preparatory courses are offered to fill a need for employees in various fields in which a lack of qualified help exists. As these courses are operated with specific objectives in view, the selection of students is determined by course prerequisites.

Almost all of these courses are offered in the Vocational-Technical schools meeting two nights a week for three hours each time, from September to June.

Manpower Development and Training Act 1962

Under the Manpower Development and Training Act program are provided for the retraining of unemployed people. Under the law, the Division of Vocational Education is charged with the responsibility of providing this training.

As the needs of industry are identified and the applicants selected by the Labor Department, these programs are conducted where the placemtnt opportunities consist. In some cases training allowances are paid to the trainees.

For the most part these programs are held in the State Vocational-Technical schools, however in some instances private and public facilities are used.

Supervisory Development Program (Foreman Training)

One of the major aids provided to Connecticut industry for the in-service growth of its personnel is the Supervisory Development Program.

It helps develop management and supervisory personnel to increase their competence in the over-all aspects of leadership. This is achieved by offering training programs in industry which are generally tailored to fit the specific needs of the organizations and designed to achieve improvement of skills, knowledge and attitudes. Programs offered to industry include:

Conference Leadership
Techniques of Supervision
Job Instruction
Job Simplification
Waste Reduction
Safety Management
Pert

Job Economics
Communications
Public Relations
Human Relations
Business Speaking
Controlled Reading
Imagination at Work

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Bureau of Vocational-Technical Schools
Hartford

INSTRUCTIONAL PROGRAM - DAY PREPARATORY STUDENTS

General Program

The Connecticut vocational-technical school program is a secondary school program consisting of a minimum three-year course beyond the 9th grade./ The 9th grade is offered as a year of exploratory experiences. The 9th grade exploratory program may take any one of the following patterns:

(1) Experiences in a general shop.

(2) Experiences in all trade offerings in a school.

(3) Experiences in an area (Building Trades, Mechanical Trades, etc.)

(4) Assignment to a specific shop with an opportunity to change to other shops during this one year without estending the time required for the completion of a full course in a four-year period.

In selected areas a 13th year program is recognized as necessary to complete the required course. However, the student is entitled to a secondary school diploma on completion of the 12th year; therefore, an additional endorsed certificate is awarded upon completion of the 13th year. The following areas require the 13th year:

12th year	13th year
Machine	Tool and Die
Basic Electronics	Industrial Electronics
Mechanical Drafting	Machine & Tool Drafting
Instrument Making	Instrument Making & Design

The ratio of shop time to a combination of related and general education time in each year of the program is established as one to one, or a 50-50 program. In general trade theory time is considered shop time and included as a part of shop work.

The recommended schedule is based on a week about cycle.

Schedule

(1) The length of the school day for students is six and one-half hours, exclusive of the luncheon period. Students are not permitted to leave the school grounds at any time without special permission.

(2) The standard program calls for seven (7) periods per-day, 35 periods per-week, of at least fifty (50) minutes each. In instances where scheduling problems result from this time table, a six period day is permissable.

(3) A ten-minute recess in the A.M. should be included; passing periods and a brief home-room period at the beginning and end of each day are recommended.

(4) The scheduling of one period per-week for school activities is recommended practice.

(5) Four marking periods per-year are recommended.

School Year

The school year shall consist of a minimum of 190 days upon which classes meet.

It is important that the integrity of the 190 day schedule be maintained. Therefore, any day or days on which the school may be closed for an emergency must be made up before the end of the school year.

School Calendar

An official school calendar is distributed each year identifying the holidays, dates of the Christmas vacation and indicating a Spring vacation.

A Spring vacation is scheduled in each school at a time to be recommended by the school director and approved by the Director of the Division of Vocational Education. This is generally planned to coincide with the local school vacation plan so as not to disrupt the transportation of students unnecessarily.

The Program of Instruction

A) The Basic Program - 35 periods per-week.

SHOP week:	9	10	11	12
Shop work & Trade Theory	34	34	34	34
Activities Period	1	1	1	1
TOTAL - Shop week	35	35	35	35

- -

RELATED & GENERAL education week:				
General Mathematics	6	-	-	-
Related Mathematics	-	6	6	6
General Science	6	-	-	-
Related Science	-	6	6	6
Blueprint Reading; Layout, Design, Art, Instrument Drwng.	4	3	4	4
English	6	6	6	6
Social Studies	5	5	6	6
Health and Physical Education	4	4	4	4
Student Activities	1	1	1	1
Study Periods	3	2	2	2
Driver Training	-	2	-	-
TOTAL - Class week	35	35	35	35

Add: A minimum of 300 clock hours of machine shop practice is recommended for Machine Drafting students.

INSTRUCTIONAL PROGRAM FOR THE SERVICE OCCUPATIONS
Day-Trade Prepatory

BAKING

	9	10	11	12
English	6	6	6	6
Social Studies	5	5	6	6
Mathematics	6	5		
Science	6	6	6	6
Health & Phys. Ed.	4	4	4	4
Art	2	2	3	3
Driver Education		2		
Typing			3	4
Study	5	4	6	5
Activity	1	1	1	1
	35	35	35	35

See note on Food Trades for recommended course in grades 11 and 12.

BEAUTY CULTURE

	9	10	11	12
English	6	6	6	6
Social Studies	5	5	6	6
Mathematics	6	5		
Science	6	6	6	6
Physical Education	4	4	4	4
Art	2	2	3	3
Driver Education		2		
Homemaking	3	3	3	3
Typing			3	4
Study	2	1	3	2
Activity	1	1	1	1
	35	35	35	35

Where full facilities are not available typing could be offered for a period each day in all years.

FASHION DESIGN

	9	10	11	12
English	6	6	6	6
Social Studies	5	5	6	6
Mathematics	6	5		
Science	6	6	6	6
Health & Phys. Ed.	4	4	4	4
Art	2		3	3
History of Costume			2	
Pattern Drafting and Draping		3	3	4
Driver Education		2		
Homemaking	3	3	3	3
Typing				2
Study	2		1	
Activity	1	1	1	1
	35	35	35	35

Note:

Where homemaking facilities are not available, typing may be offered in 10th, 11th, and 12th grades, or study periods in the 9th, 10th and 11th grade, increased to one a day.

Where neither typing or homemaking are available, art might be expanded particularly to be included in the 10th grade.

FOOD TRADES

	9	10	11	12
English	6	6	6	6
Social Studies	5	5	6	6
Mathematics	6	5		
Science	6	6	6	6
Health & Phys. Ed.	4	4	4	4
Art	2	2	3	3
Driver Education		2		
Typing			3	4
Study	5	4	6	5
Activity	1	1	1	1
	35	35	35	35

If numbers warranted, a course covering the specific management problems of the foods industry could be offered in the 11th and 12th grades. This would be applicable to bakery students as well.

OCCUPATIONAL HOME ECONOMICS

	9	10	11	12
English	6	6	6	6
Social Studies	5	5	6	6
Mathematics	6	5		
Science	6	6	6	6
Health & Phys. Ed.	4	4	4	4
Art	2	2	3	3
History of Custume			2	
Pattern Drafting and Draping		3	3	
Driver Education		2		
Homemaking				
Typing			3	4
Study	5	1	1	5
Activity	1	1	1	1
	35	35	35	35

PAINTING AND DECORATING

	9	10	11	12
English	6	6	6	6
Social Studies	5	5	6	6
Mathematics	6	5		
Science	6	6	6	6
Health & Phys. Ed.	4	4	4	4
Art	2	2	3	3
Blueprint Reading	3	3	(3-4)	(3-4)
Driver Education		2		
Typing			3	4
Study	2	1	(3-2)	(2-1) or 5
Activity	1	1	1	1
	35	35	35	35

Bluepring reading, as well as art, has been strongly recommended for the painters and decorators. This can be offered as suggested or offered in all 4 years in the usual pattern by eliminating typing or lessening the number of study periods.

Driver Training

The Connecticut Vocational-Technical schools recognize the importance of driver training as a phase of the education of the modern youth. The classroom phase consisting of 30 hours minimum will be offered in the sophomore year for all students, providing they will reach age 16 by the time they finish the course. This can be offered over the entire school year but it would be preferable to offer it in one semester.

A minimum of 6 hours "behind the wheel" road phase will be given outside of regular school hours. The instructor will be a certified Driver Education instructor.

Music in the Vocational-Technical School

The value of music as a desirable emotional outlet is well recognized in the vocational-technical schools. A planned program of choral and group singing is desirable.

Consideration should be given to new applicants to teaching positions who have qualifications which would assist in the development of such a program.

In smaller schools where the plan to have a qualified music instructor on the staff would be more difficult, funds and positions for part-time services may be requested in future budgets.

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Instruction for Part-Time Trade Extension (PTX) Students

In accordance with the agreement made with the State Apprenticeship Council for the training of apprentices in the vocational-technical schools, instruction is organized around mathematics, science, blueprint reading, trade theory and other related areas. This indicates that apprentices receive their practical training on the job and receive their related subjects and general education at the vocational-technical school.

Care should be taken in the organization of the P.T.X. program to reserve the apprentice's four or eight hours weekly for related subjects and/or general education.

Status of P.T.X. Instructors

While formerly we had always regarded the P.T.X. department as a separate department within the structure of the vocational-technical school, the appointment in most schools of the Adult Education Supervisor as an Assistant Director in charge of Adult and Extension Services now provides these respective schools with a person who would be responsible for all teaching supervision in the P.T.X. area. This would make it unnecessary to employ P.T.X. instructors beyond the instructor or senior instructor level.

Statement of Practices Concerning Student Credits

"In accordance with standards agreed upon with the State Apprenticeship Council concerning related training to be given apprentices attending the vocational-technical schools, graduates of the vocational-technical school program shall not be expected to repeat instruction of a related nature for the trade in which a diploma was awarded.

"All other applicants for the apprenticeship program who are graduates of a secondary school program shall have their respective credits evaluated by the vocational school counselor in cooperation with the part-time trade extension instructor, in order that the enrollee may be placed at the point in the instruction program where he or she is most likely to profit.

"Optional with enrollee there will be opportunity to extend the individual's education at an advanced level."

Admission Standards for Connecticut Vocational-Technical Schools

Vocational-technical education for trades and industries is a form of secondary education providing general education, trade training and technical and related instruction for the trade. It is supported by local, state and federal funds for the purpose of preparing students for entry into the skilled trades. It is a specialized offering of the Connecticut public school secondary educational program.

Different trades require different types of ability. This fact is recognized by the vocational schools in their guidance and admission practices. Because of this fact, vocational education can and does serve a cross section of ability levels within the framework of its specialized pattern.

Special cases are always given individual consideration when it is evident that the program can contribute to the growth and adjustment of the applicant.

Minimum Standards of Admission to the Connecticut Vocational-Technical Schools

(1) Satisfactory completion of the work of grade 8 and readiness for grade 9. Increasing emphasis will be placed upon admission at the 10th grade, however, thus requiring the completion of grade 9 for acceptance.

(2) Physical fitness for the trade. It is the policy of the Vocational-Technical Schools to administer physical examinations to 9th and 12th grade students. These physicals are administered by the regular school physician with the assistance of the school nurse.

(3) Interest in vocational education.

(4) Preference will be given to students who show evidence of ability to satisfactorily complete the instructional program. Judgments will be based on the evaluation of test results, school records, previous experiences and recommendations of the sending school.

(5) Students will be accepted in September. This period may be extended to October 1st when satisfactory arrangements for transfer can be made with the referral school.

Admission Practices

(1) Preference for enrollment should be given to the regular secondary school student.

(2) Students having completed 10th and/or 11th grades elsewhere will be required to complete the three-year vocational-technical school program for graduation. Credit for general education courses may be given for work completed in other schools. These credits may be used to reduce the total training time if required courses can be scheduled for completion before the end of the third year.

(3) High school graduates may secure a vocational-technical school diploma in a minimum of two-years providing the work required in shop, shop theory, and related subjects is completed. However, where certain trade areas require the 13th year in the regular program, the High School graduate would be required to take this additional year also thereby making a total of three-years beyond his 12th grade.

(4) Veterans or others over 18 years of age may be accepted for trade training if space is available. These are generally unit courses of shorter duration than the full diploma program.

(5) Out-of-state day preparatory students are accepted on the basis of the standards in use. A tuition charge is made, determined annually by the Director of Vocational Services and based on the per-capita cost at that time.

Eye Protection

The education and training programs offered by the vocational-technical schools and institutes of Connecticut are such that nothing short of a 100% program of eye protection is essential for staff and students. In industry, for whom we are preparing our students, a 100% eye protection program demands that everyone entering a department in which even the smallest amount of danger to eyes exists must wear eye protection. This is the most common approach in industry itself and results in the most successful eye protection programs by far. The vocational-technical schools and institutes of Connecticut should follow the best industrial practices in existence and should adopt the 100% eye protection program. Complete eye protection can be achieved in only one way: a firm policy should be adopted and established and directives to carry out that policy should be issued by the Division of Vocational Education.

Each department, trade as well as related, is to determine the areas, equipment, and projects for which protective glasses are to be worn, and henceforth every student, staff member, and administrator thus effected will be required to have a pair of safety glasses of his own for such designated areas, equipment, and projects. Each Director is to work out details with his Department Heads.

Examples:

Machine, Tool & Die --- Glasses worn at all times
Carpentry --- When working on power equipment and tools
Auto --- When working with power tools, machine lab work, under cars
Materials (Sr.Science) --- e.g., When working on testing machine
Chemistry --- When doing experiments in which splashing, etc., might occur

A 100% eye protection program is the immediate goal for each vocational-technical school and institute to achieve, indicating that the schools, just as the most forward-looking industries, are concerned with complete safety training and protection of every individual within its jurisdiction.

Competitions in Vocational-Technical Schools

Among the primary objectives of the Connecticut program of Vocational Education are the development in students of respect for high achievement and the creation in them of the desire to excell. Each vocational-technical school should establish and promote programs for giving recognition to those pupils whose performance in any phase of the school program is outstanding.

Appropriate programs for accomplishing these objectives include:

(1) An Honor Roll at each marking period.
(2) A chapter of the National Honor Society.
(3) Annual awards for excellence in specific subjects and activities.
(4) Intra-mural competitions.
(5) Establishment and recognition of Valedictorian and Salutatorian at graduation.

Inter-school competitions in trade subjects when supported by instructors and students provide an effective device for stimulating high level performance. Such competitions should be encouraged by all appropriate means, but participation in them by a school, or by students, is to be entirely voluntary.

Schools are cautioned against soliciting prizes or funds from industry for annual awards for excellence in specific trades or subjects. The acceptance of any gifts must be approved by the State Board of Education.

Marking and Grading

Student marking should be on the letter grade pattern.

The grade for each marking period should be independent of any previous period. The final grade should be based upon an average of the periods for the year.

The grade for shop work should be based on accomplishment for the period as measured against achievement levels and on standards of workmanship for an apprentice at the same level.

The basis for grades in related and general education courses is to be the established standards of achievement for each grade level. The achievement levels set-up for each subject provide such standards.

The point system for promotion and graduation can also be used for weighing grades to determine student ranking when desired for selecting honor students.

POINT SYSTEM FOR PROMOTION AND GRADUATION

SUBJECTS	GRADES AND POINTS 9	10	11	12
Trade Shop	24	24	24	24
Trade Theory	6	6	6	6
English	6	6	6	6
Social Studies	6	6	6	6
Mathematics	6	6	6	6
Science	6	6	6	6
Health and Physical Education	3	3	3	3
Blueprint Reading	3	3	3	3
Four-year Program (maximum deficiencies per year)	-6	-6	-6	-0
Cumulative deficiencies (Maximum)	-6	-12	-15	-15
Three-year Program (maximum deficiencies per year)		-6	-6	-0
Cumulative deficiencies (Maximum)		-6	-9	-9

STIPULATIONS

1. Addition or subtraction of subjects to the above Core (Costume Design, Typing, Driver Education, etc.) may be accomplished by the administration as set forth in existing policy. The decision as to whether this will be a major subject (6 pts) or minor subject (3 pts) will be based on the number of class hours the course is scheduled each week. A major subject should meet approximately 5 hours.

2. Credit deficiencies for subjects failed may be regained through an acceptable procedure of make-up work. This may consist of an accredited summer course in the area failed offered by a local high school or through completion of a summer assignment and examination administered in the technical school prior to the start of the next school year. Make-up for shop failure requires additional years of attendance.

3. Successful make-up work for failure in Trade Theory, related and general subjects will be assigned full point credit (3 or 6 pts) and a mark equivalent to the minimum passing grade (60 or D).

4. Two successive failures in any subject requires satisfactory make-up work for promotion or graduation, e.g., failure of Blueprint Reading without successful make-up in sophomore and junior year.

5. To avoid the possibility of a student failing the same subject in any three-year period, the student must make up the second failure in order to be eligible for promotion.

Student Records

A cumulative student record shall be maintained while the student is in attendance and shall be permanently retained in a fireproof depository thereafter. These records shall include attendance, absence, tardiness, subject grades, promotions, aptitude tests, health examination forms, and diplomas or certificates granted.

Diplomas

(1) The vocational-technical diploma is awarded to students who have satisfactorily completed the four-year program (9-12) or the three-year program (10-12).

(2) Students having completed the 10th and/or 11th grades elsewhere will receive the diploma if all required courses, trade, related and general education are completed either by transfer credit or within the vocational-technical school.

(3) The high school graduate is awarded a vocational-technical school diploma on the satisfactory completion of the required shop, shop theory and related program, usually a minimum two year course in the vocational-technical school.

(4) In selected areas where a 13th year program is recognized as necessary to complete the required course the student is entitled to the vocational-technical school diploma on the completion of the twelfth grade. An additional certificate is awarded upon completion of the 13th year, indicating the additional year of specialization.

Following is a list of such courses:

12th year	13th year
Machine	Tool and Die
Basic Electronics	Industrial Electronics
Mechanical Drafting	Machine & Tool Drafting
Instrument Making	Instrument Making & Design

Certificates

A vocational-technical school certificate is granted upon the satisfactory completion of a prescribed unit or units of trade work.

A statement of achievement may be issued to those completing shorter special courses.

Transcripts

Transcription of vocational-technical school records will be given to students on request.

State High School Diplomas - Procedures for obtaining

(1) If a student graduated from the day trade preparatory program after June 7, 1944, his diploma is a high school diploma and no high school equivalency examination for the Qualifying Academic Certificate need be considered.

(2) Those who completed the regular day trade course prior to the date mentioned above have not automatically received a high school diploma and should follow these steps if they wish to obtain the equivalent:

   (a) Submit Sec. Ed. Form #1, Application for Connecticut High School Diploma and/or Qualifying Academic Certificate to Room #369, State Office Building, Hartford.

   (b) Attach to the application a transcript and any other evidence of work completed in secondary schools.

   (c) Enclose three dollars ($3.00) fee.

Upon receipt of the application a recommendation from the Bureau of Vocational Education will be obtained, which will state whether or not the evidence submitted indicates completion of a full course of high school level. Graduates of the full course of shop, related and general education completed in the day trade preparatory program prior to June 7, 1944 will be regarded as having completed high school and providing all other requirements have been met, a State High School diploma will be issued without examination.

In cases where the Bureau of Vocational Education does not indicate completion of the high school level program, applicants will be notified that they should take the examination.

Textbooks

The vocational-technical school may provide the required textbooks by either of the following methods:

(1) The school may purchase one copy for each student. Each copy to be numbered and assigned to an individual for the extent of the course. The student will be held responsible for the condition of the text.

(2) The school may purchase enough texts for the largest class group plus five to ten additional copies for home study assignments.

(3) All books used as textbooks must be selected from the lists prepared and revised by the curriculum committee and approved by the directors. In special cases, when approved textbook lists do not exist, the textbooks should receive prior approval by the central office.

Instruction in Trade Related Subjects

Related subjects should be taught in a realistic manner. In every possible situation a basic principle or concept should be presented with a trade application. However, it is clearly understood that in the group method of instruction each and every concept will not have trade application for every trade. In such instances application should be made to general life experiences in order to make instruction meaningful.

Home Study Assignments

Instructors are permitted to make reasonable home study assignments. Where home study is included in the plan of instruction the following guide points should be observed:

(1) Judgement should be exercised in the amount of home study assignments due to the length of the school day, time spent in commuting to and from school and the out-of-school-hours job and home responsibilities of the students.

(2) Instructors should be informed about the assignments made by other instructors and a cooperative plan should be developed to control the amount of home study assignments at any one time.

(3) Wherever home study assignments are made, such assignments should be considered as part of the program of instruction and should be treated in the same way as other assignments in regard to grading, weighting and proportional credit.

(4) A general understanding of the purpose of home study assignments should be developed among students. This is suggested as a means of insuring the students' recognition of home study assignments as part of the regular course requirement.

(5) Where home assignments are regularly made, textbooks should be provided for each student.

(6) Home study assignments should not be construed to mean textbook assignments only. A wide variety of assignments involve library assignments, visitations to resource people, viewing a motion picture or particular television program, newspaper reports, magazine article reports, etc.

Field Trips

The Bureau of Vocational Education approves carefully planned and supervised field trips and other out-of-school activities as part of the curriculum. Initial planning and means of transportation must be identified and approved by the school director. Instructors are directed to inform parents in writing of the planned activity in order to get permission for each student to participate. It is important to realize, however, that in any case of liability, such a signed statement proves that the parent is fully cognizant of the proposed activity and its purpose.

Any trip outside of the state, must have Central Office approval at least two weeks in advance of the planned date.

See following section in this bulletin on Transportation of Students for regulations.

Following is the sample letter of notification and permission slip to be filled out by teacher and parent, and filed in the school office before commencing a field trip or other out-of-school activity:

(School Heading)

____
(Student's Name)

____
(Department or Home Room)

____
(Date)

Dear _______________:

A group of students including your (son, daughter) is planning on a school approved activity to _______________
The event will take place on _______________
Time involved _______________
The group will travel by _______________
Cost (if any) including transportation, fees and lunch, will amount to
$_______________.
If you approve of your (son's, daughter's) participation in the above activity, please sign the slip below, indicating your knowledge of this activity and your consent.

Please return slip by _______________
(Date)

Sincerely yours,

____
(Instructor)

- -

_______________ has my permission to go on
(Student's Name)
the school approved activity on _______________.
(Date)

Signed _______________
(Parent or Guardian)

Transportation of Students

Students should be sent on outside assignments only where learning experiences are involved. Such trips (errands) should be kept to a minimum. In such instances public transportation must be used.

Transportation of students to outside production jobs is limited to the school bus or station wagon. Students must report ot the school at the beginning and end of each day. No student is permitted to report at the scene of the job or leave for home from there.

All cars used for the transportation of students to authorized school related functions must be fully insured to the limit set by the State. At no time is a student permitted to drive himself or others to any activity, production job, school or inter-school function.

A student may attend an educational program outside of the school without an attendant instructor, provided that necessary travel is by common carrier.

The school bus may be used for the transportation of students to school related functions within the State.

Transfer of Students from Vocational-Technical School to Local Junior or Senior High School

When a student's progress in the vocational-technical school is not satisfactory the school will try to help the student toward better adjustment through a more appropriate vocational course and/or counseling. If it appears that such adjustment might be more effective in a different school an educational plan will be developed through mutual agreement by the vocational-technical school, the local school, the parents and the student.

Whenever a transfer is being considered from the vocational-technical school to a local school, contact shall be made between the two schools involved. Such transfer shall be effected through procedures mutually acceptable to both schools. Transfer will be made only at such time in the year when the receiving school can provide a reasonable program for the adjustment of the student.

Transfer from the Local School to the Vocational-Technical School

Each vocational-technical school should arrive at an understanding with the local school system regarding transfer of students at times other than the beginning of the school year. Such transfers are made on the same principle of mutual planning as indicated in the preceding section, for the educational progress and benefit of the student.

Disciplinary Procedures

Any disciplinary problem should be approached with a constructive purpose. The school, as a social agency, is a major force in the prevention of juvenile delinquency, along with the home and the church. The school's purpose is to use all ways and means to help out youth to grow to maturity and to become effective and useful citizens in the community. The individual instructor, the administrator and the schools as a whole have the obligation and the challenge to do everything possible for each student to insure his progress and development.

Suspension

A student may be suspended by the school director for the following reasons:

(1) Serious breaches of discipline.

(2) Failure to conform to school regulations.

(3) Conduct detrimental to good school morale.

(4) Persistent lack of effort to profit from the program of instruction.

Suspension of a student should be used only as a measure of last resort and after constructive efforts have been made by individual staff members, the school counselor and the director, using all resources available to the school.

Every effort should be made by the director or members of his staff to make personal contact with the student's parents or guardians to make them acquainted with the student's difficulties and to get their help and cooperation in the solution of the problem.

A letter should be sent to the student's parents advising them of the reason for suspension, with a copy to the superintendent of schools in the town from which the student comes and a copy to the Bureau of Vocational Education.

No staff member, other than the school director, has the authority to suspend a student.

Dropping Students from School

Students may be dropped from the rolls of the vocational-technical schools only under the following conditions:

(1) Voluntary withdrawal of students 16 years of age or over.

(2) Non-attendance of students over 16.

(3) Transfer to the local high school through mutual agreement.

(4) Behavior deemed unsatisfactory.

Whenever students leave the vocational-technical school, it is the responsibility of the vocational-technical school to notify the local superintendent.

All students under 16 years of age are required to be in some school unless a leaving certificate is obtained.

Expulsion

No student under sixteen years of age may be expelled. The law requires that he be in school. If, the use of all regular procedures and consultation with parents fails to bring about correction of the student's attitude or behavior, the director should confer with the superintendent of schools of the town in which the student resides to determine whether transfer of the student is acceptable or desirable. When it appears that no other recourse is effective the case should be referred to juvenile court.

If the student is over sixteen years of age and all efforts to get him to correct his attitude or behavior have not brought the desired result and his conduct is a serious detriment to good morale and is interferring with instruction of other students, the director may recommend to the parents or guardian that the student be withdrawn from school. If this is not done, the director may recommend to the Director of Vocational Services that the student be dropped from the school. Such a recommendation should be made in writing stating the reasons therefor, and the efforts which have been made to correct the student's attitude or behavior. The expulsion of the student may become effective only at the time and date specified by the Director of Vocational Services in his approval of the recommendation.

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Hartford

THE INSTRUCTIONAL MATERIALS DEVELOPMENT PROGRAM

A State-wide Curriculum Committee Organization

CURRICULUM COMMITTEES Total Staff Instructors - 14 schools	35 Curriculum Committees, covering all subject areas - Trade, Related, and General Education. Responsible for the development and continuous improvement of all instructional material; also concerned with teaching techniques, materials, equipment, scheduling, etc.
CHAIRMAN STEERING COMMITTEE CONSULTANT	Chairmen of Curriculum Committees and the Steering Committee membership are appointed by the Bureau Chief for Vocational-Technical Schools. A consultant is assigned to each committee by the Central Office, selected from the school directors and assistant directors.
CURRICULUM COORDINATOR	The curriculum coordinator is primarily responsible for the continuing improvement of instructional material. He serves in a liaison capacity with the curriculum committees, the consultants, and the administrative staff. He is the secretary of the Program Study Committee.
PROGRAM STUDY COMMITTEE	This committee, appointed from the school administrative group by the Director of Vocational Education, serves as a screening device, reviewing materials and recommendations submitted by the Curriculum committees. Studies methods, techniques and plans affecting instruction; initiates programs, advises administrative action.
BUREAU OF TRADE & INDUSTRIAL EDUCATION Supervisory Personnel for State Program	Responsible for instructional program. Supervises Curriculum Committee activities.
ADMINISTRATION State Director - Voc. Education Central Office Staff with Directors of Vocational-Technical Schools	This group votes final approval or disapproval on new projects, materials, plans, and instructional matters referred to it by the Program Study Committee. Holds monthly meetings.

Curriculum Development Program

The curriculum committee organization provides for the continuing development and improvement of our instructional materials. All staff members are expected to participate in this program. However, it is now evident that changes in assigned responsibilities and procedures are necessary in order that we assure prompt and effective attention to the needs of the curriculum. The following organization and plan of operation is established:

(1) Curriculum Committees All instructors in a subject area, in all 14 vocational schools, constitute a particular curriculum committee. Thus every instructor is expected to participate in the program for curriculum development. He is encouraged to identify needs, contribute material, information, and recommendations; he should participate in the preparation and review of material considered important for the instructional program.

(2) Chairman Chairmen of all 35 curriculum committees are appointed by the Bureau Chief for Vocational-Technical Schools on the basis of experience and recognized leadership qualities. The chairman is responsible for the activities of his committee, for identification of needs or problems, recommending assignment of projects to instructors, and to initiate requests for steering committee meetings. He is expected to maintain close relationship with his committee, with the curriculum coordinator, and with all other consultants who would assist in planning or advising in the subject area. Whenever the chairman and his steering committee completes any action for change in the curriculum, the chairman will submit such material to the curriculum coordinator with the recommendation of his committee for adoption by the directors.

(3) Steering Committee The selection of instructors to serve as steering committee members will be made by the bureau chief for trade and industrial education. In these selections, he may be assisted by the staff consultants and the committee chairmen. The steering committee is the basic operating unit representing the full committee. Meetings of the steering committee will be held to study needs and act on all proposals or changes needed in the curriculum. Any new materials affecting the curriculum will be submitted to the curriculum coordinator for presentation to the Program Study Committee. Copies of such material will also be furnished members of the full committee for review and for further comment. However, with the approval of the Program Study Committee and acceptance for adoption by the school directors, such changes will be in effect as the new curriculum.

(4) Consultants Each committee is assigned a consultant appointed by the central office from the school administrative staffs. He will advise committee chairmen as to needs of the curriculum; he will attend meetings of the steering committee; he will assist the committee in the interpretation of policy and in other administrative details. The consultant will also encourage all members of his committee to participate in further study and work for the improvement of instructional materials. Members of the central office staff for trade and industrial education serve as advisors to the curriculum committees in all subject areas. Assistance is provided in the identification of needs, procurement of resource materials, selection of instructors for special assignments, and in the final organization of the material.

(5) Meetings As stated above, chairmen will present requests for steering committee meetings to the curriculum coordinator. This request should include a brief statement of purpose for the meeting and a recommendation for time and place. Approval for these meetings will then be secured and the plans for the meeting will be arranged with notices to the staff members involved. Reports of all meetings should be submitted promptly to the curriculum coordinator.

(6) Committee Interests The Curriculum Committees should have a wide range of interests. For example, these committees are expected to:

(a) Make certain that the courses of study are up-to-date, in line with industrial and trade needs and appropriately designed for students in the vocational-technical schools.

(b) Make selections and recommendations with regard to texts, reference books, and materials.

(c) Recommend shop clothing and procedures concerning shop safety.

(d) Call attention to desirable field trips and other profitable educational experiences.

(e) Recommend teaching methods, techniques, etc.

(7) Secretary It is important that a secretary be selected for each committee. It is suggested that the chairman assume responsibility of appointing the secretary to serve annually. This position must be recognized as a most responsible and important function: the successful activity of a curriculum committee will be largely dependent upon the reporting and interpreting of all committee deliberations to the central office staff, and providing a permanent record of such activities for the committee membership. Therefore the best possible selection should be made for this position.

Curriculum Coordinator

The curriculum coordinator is primarily responsible for the continuing improvement of instruction. He serves in a liaison capacity with the curriculum committees, the consultants, and the administrative staff. In particular, he works closely with the committee chairmen, steering committees, and their consultants in the planning and preparation of new material. Assistance is provided all staff members in the acquisition of new texts or other publications for review, and in the maintenance of a curriculum library as a resource center. As secretary to the Program Study Committee, the coordinator advises on committee matters, presents material recommended for approval, and, when adopted by the school directors, arranges for printing and distribution. He is also responsible for scheduling all steering committee meetings as may be requested by committee chairmen, consultants, or central office staff.

The Program Study Committee

This committee is the screening device for the administrative staff to review all material and recommendations of the curriculum committees. This Program Study Committee is appointed by the State Director with membership from the school administrative staffs. This committee also studies methods, techniques and plans affecting instruction; it may initiate programs and advise administrative action. All projects or plans developed by the curriculum committees and recommended for adoption are presented to the Program Study Committee for review. This committee may refer the material back to the curriculum committee for further improvement, or if accepted, the project is then presented to the directors for final approval.

The Administrative Staff

The State Director of Vocational Education includes on his staff for administration the central office T & I staff and the vocational-technical school directors and assistant directors. This group is the final approving unit for any changes in the curriculum. Regular monthly meetings are held and at these meetings the Program Study Committee reports on all matters relating to the program of instruction. Recommendations for approval and adoption are then presented.

Central Office Supervision

In order to provide for the maximum amount of assistance to curriculum committees, the central office 'Trade and Industrial Education' staff is closely associated with the work of the committees. Committees should feel free to call upon the following individuals for assistance at any time in connection with their work. For convenience, and to make the best use of individual talents, the central office staff is listed below:

Mr. Laurence W. Eddy - Chief, Bureau of Vocational-Technical Schools.

Miss Anna C. Moore - General Education, School library development, Girls' Trades, student councils, and student activities.

Dr. Marie Lescoe - Health and Licensed Practical Nurse programs.

Mr. Frank Ferrucci- Related Instruction.

Mr. Walter A. Bialobrzeski - Teacher Education Activities.

Mr. Fredrick Okula- Trade Instuction.

Mr. John Higgiston - Adult Education & Apprentice Training.

Mr. Angelo Tedesco - Curriculum Consultant

All other committees such as the audio-visual committee, the guidance and counseling committee and the physical education committee should request any special assistance from Mr. Tedesco.

PROFESSIONAL STAFF - PRACTICES PERTAINING TO

The official school year for the instructional staff is September 1st to June 30th. Salaries, however, are paid on a twelve month basis.

Personnel occupying Instructor, Senior Instructor, Department Head, or Senior Department Head positions in the vocational-technical schools are eligible for twenty-six pay periods per year, although their working schedule is based on the approved school calendar which is generally 196 school days for staff and 190 school days for students. Instructor personnel beginning a school year after September 1 or terminating their services before the close of the school year, June 30, will receive less than the twenty-six pay period compensation. In such cases, the salary will be based on the number of school days in employment as related to the complete school year of 196 days.

Instructors planning to terminate their service at the end of the school year, should notify the administrator at the earliest opportunity in order that a replacement may be located preferably before April 1st. In such cases resignation is effective August 31st.

Instructors in the Vocational-Technical Schools are required to be present at all of their regularly scheduled classes, and to participate in such staff meetings, department meetings, student activity meetings, sessions for remedial help and "make-up" time for students and all other essential activities as the unit Director or other Vocational Division officials may require. Fifteen minutes after the students have been dismissed at the close of instructional activities each day, instructors may leave unless activities such as those (and others) described above require their presence in the school. In case of question, the director of the institution shall be responsible for making the decision.

In order that the instructional activities of the school day may be started promptly and efficiently, instructors should be present in their individual classrooms, laboratories or shops approximately 15 minutes in advance of the arrival of the students.

Service Ratings

Service ratings are required of all State employees. Probationary instructors (those with less than three years of satisfactory performance) receive a rating each six months for the three-year period. These are filed with the Personnel Division by February 1st and July 1st of each year. The appropriate central office consultant should participate in the rating of all probationary teachers and others as necessary.

A service rating for all professional personnel is filed before the close of each school year, or not less than thirty days prior to the annual increment date.

Supervision of Instruction

The supervision of instruction is the responsibility of local administration. The school director and his appointed assistant, the Assistant Director or other school personnel identified by the director as well as the Department Head are the immediate supervisors of instruction in the school.

Central Office Consultants, in their appointed fields assist in the supervisory program as requested. Their services are available to the administrative staff and instructional staff at all times.

Supervision of Students

The philosophy of instruction in the vocational-technical schools includes the use of customer or "production" jobs as part of the instructional procedures.

In the handling of such production work, it is often necessary for students to be out of the school working on private homes, in industries and businesses. It should be clearly understood, however, that all production jobs worked on by students must be fully supervised at all times by an instructor assigned to the task.

It should be clearly understood that students in the vocational-technical schools must be under the direct supervision of an instructor at all times.

Protection of Teachers and Employees in Damage Suits

"Each Board of Education shall protect and save harmless any member of such board or any teacher or any employee thereof or any member of its supervisory or administrative staff . . . from financial loss and expense, arising our of claim, demand, suit, or judgement by reason of alleged negligence or other act resulting in accidental damage to or destruction of property, within or without the school building, providing such teacher, member, or employee, at the time of the accident resulting in such injury, damage, or destruction was acting in the discharge of his duties within the scope of his employment or under the direction of such Board of Education."

It is sufficient to say that teachers cannot generally be held liable in the event of an accident to a pupil providing the teacher can demonstrate that reasonable care has been exercised and that there was no evidence of negligence.

Substitute Teacher

In the operation of a vocational-technical school program, it is necessary for an instructor to be away occasionally from his regular teaching assignments, because of an official out-of-school assignment, illness, or to transact private business. Insuch cases where an instructor is absent from his teaching assignment, provisions have been made for the director of the technical school to obtain a substitute teacher. Where information concerning a forthcoming absence is known in advance the instructor should take every possible step to co-operate with the director of the school and help to locate a qualified person for the substitute assignment.

Procedures for Use of Substitute Teachers

(1) Positions for vocational school instructor substitutes have been established by the central office and may be used by the schools without requesting the establishment of such positions on Form 14.

(2) The positions have been established at a per diem rate based on the current salary schedule.

(3) If instructors are to be employed for less than the usual teaching day of six and one-half hours, a prorated per diem rate should be used. If a substitute is to be employed for a continuing period in excess of two weeks, he should be placed on the regular payroll in an annual salary position established for the purpose. This will require a Form 14.

(5) Substitutes employed for more than two days in any school year should be placed on the supplementary payroll. This will require the usual appointment forms.

(6) Substitute instructors are not paid for days when students are not present.

(7) Substitute instructors, on a daily rate of pay, will be employed after the last day of classes only with specific approval of the central office.

(8) Substitutes employed for 40 days or more to teach in the same area must meet the certification requirements for that area. See Regulations for Teacher Certification, 10th Ed., page 19, Sept. 1958.

Instructor Preparation Periods

Within the scheduling structure of each vocational-technical school, every effort should be made to provide related and general education instructors with at least one preparation period each day (average). These are provided to enable instructors to prepare and organize materials and equipment for instruction, to grade papers, prepare tests and other such professional duties. However, wherever, in the interests of the efficiency of school operation, it becomes necessary to assign instructors to additional duties which prevent the scheduling of this preparation period, it should be understood that administration will make every effort to provide this period at the earliest possible opportunity.

Professional Meeting on School Time

Professional meetings which call an instructor away from school on school time require special permission of Administration.

Curriculum steering committee meetings should be held in the late afternoon or evening. Chairmen of such committees, planning such meetings, must clear their Directors and Central Office to get approval before proceeding to schedule meetings.

Where such meetings involve the expenditure of funds for travel or meals, approval must be obtained in advance from the Bureau Chief.

Staff Promotions in Vocational-Technical Schools

Whenever department head or senior department head position vacancies occur, the Chief of the Bureau of Vocational-Technical Schools should be notified before a definite commitment concerning appointment has been made. This is in keeping with the established procedure by which all staff members are acquainted of openings which might be regarded as promotions.

It is recognized that in most cases, promotions of this kind will occur within a school but in the interest of obtaining the best qualified people and in maintaining the understanding among the staff that they have an opportunity for promotion, the existence of such openings must be made known to all eligible applicants.

Teacher Certification

Certification is the responsibility of the individual. Details of certification requirements can be found in the official bulletin of the State Board of Education "Regulations for Teachers'Certificates" current edition available from the Bureau of Teacher Certification, State Office Building, Hartford.

Administrative Requirements for Advancement in the System

For advancement from Instructor to Senior Instructor grade, five years of satisfactory teaching and 300 clock-hours of professional credit are required. The transfer occurs at that point of the salary schedule when the transfer is made on step, and provides for a higher maximum.

Department Head positions have been primarily established for supervisory responsibilities and are confined to the following fields:

1. Head of a Trade Department (generally there is only one head of the machine-tool and die section and one department head of the Electronics section)

2. Head of the Related Subjects section in schools with five or more instructors teaching in this field.

3. Head of the General Education section in schools with five or more instructors in this field.

4. Guidance Coordinator - Department Head level - (one per school)

Movement from the Department Head classification to the Senior Department Head classification is regarded as a reclassification and is contingent upon completion of:

a. Five years of satisfactory service in vocational-technical schools
b. 450 clock hours of approved professional study

Professional Improvement Activities for Unclassified Personnel of the Bureau of Vocational Education

The activity pursued by an individual, if it is to be approved, should contribute to the overall state program, the instructional program of the school or the professional growth of the individual.

Professional credit for advancement in service may be acquired in several ways. These credits must not be confused with certification requirements.

Activities which may be approved and the conditions which must be met are shown below:

A. Courses for College Credit

1. Courses credited toward a degree in Vocational Education.
2. Courses in the subject field of the teacher.
3. Workshops and Seminars in Vocational Education.
4. Other college courses, graduate or undergraduate for which prior approval has been secured from the school director and the supervisor of trade and industrial education.

B. Work or Observation in Industry

It is accepted as policy that vocational instructors must keep abreast of changes in materials, processes and equipment in industry and that work or observation in industry is a desirable professional activity.

Conditions for Approval:

(1) The plan for the activity must be submitted and approved in advance.
(2) The plan shows in detail general purpose of the activity, its value to the school program, the operations and/or places to be observed, the time to be spent in each, the people to be interviewed, the factors to be studied and other special conditions.
(3) A complete report must be submitted upon completion of the activity showing in detail the observations made, recommendations and conclusions.

C. Travel - Domestic or Foreign:

It is accepted that travel is a factor in the growth of individuals and that such growth is desirable for all teachers. However, the justification for such travel must meet the conditions established below:

Conditions for Approval (by the Director of the Division):

(1) The individual must have completed the professional requirements of the senior instructor position.
(2) The plan of travel must be submitted in advance for evaluation by the Trade and Industrial Unit.
(3) The plan should show the general purpose of the travel, places to be visited, schools and other activities to be observed, data to be gathered and expected results in terms of the instructional program of the school and the individual.
(4) A report must be submitted on completion of the project showing in detail the places visited, observations made, recommendations and conclusions.

D. Special Studies and Assignments:

Activities such as the graduate survey, assignments to central office studies, assignments within a school such as course development, shop layouts or studies of local training needs, and other similar projects are considered as professional improvement.

Conditions for Approval:

(1) The plan for the project should be submitted in advance for approval by the trade and industrial education administration.
(2) The project should contribute to the improvement of the instructional program.
(3) A report of the project must be submitted upon completion of the project describing what was accomplished.

Professional Improvement Credit

Professional improvement credit for satisfactory participation in workshops and institutes may be given on the same basis as for college laboratory courses, i.e. one clock-hour of credit for every two hours of participation. This applies to central office clock hour credit requirements for promotion.

College credit will be given only with the prior approval of the participating college.

Athletic Coaches - Compensation for

The State Board of Education has approved the following differentials to be paid to staff members as compensation for the additional services and time while serving as coaches for the following athletic teams:

	FOOTBALL	BASKETBALL	BASEBALL	SOCCER
Head Coach	$ 450.00	$ 450.00	$ 450.00	$ 450.00
Assistant	$ 300.00	$ 300.00	- - - -	- - - -

Each coach must be a member of the Vocational-Technical school faculty.

GENERAL PRACTICES

Acceptable School Attire for Students

The school administration in most instances, establishes an acceptable code of attire for students in the shop and classroom week. In most instances curriculum committees have specifically recommended shop attire which has been selected with both durability and safety factors in mind.

Listed here is a minimum requirement which it is felt must be met.

Proper School Dress and Grooming for Boys:

Acceptable

(1) Dress shirt and tie or conservative sport shirt with or without tie and with or without suitcoat, sport jacket or sweater. Shirts shall be tucked in and buttoned.
(2) Standard trousers or khaki cleaned and pressed.
(3) Shoes cleaned and polished.
(4) The student shall be clean shaven and side burns not lower than eye level.
(5) Hair shall be cut and combed in a conventional manner.
(6) Shop clothing shall be determined by the shop instructor.

Not Acceptable

(1) Dungarees or soiled unpressed khakis or slacks.
(2) T-shirts or sweat shirts.
(3) Extreme styles of shoes, including cleat, hobnail, engineer's or motorcycle boots.
(4) Black leather jackets or jackets to identify a membership in a gang or club.

(5) Motorcycle or captain's type caps.

Proper School Dress and Grooming for Girls: (classroom & shop)

Acceptable

(1) Blouses and skirts, skirts and sweaters, dresses or suits. Arm holes shall be high enough to cover undergarments and materials shall not be conspicuously thin.
(2) Shoes shall be cleaned and polished and of a conventional type worn with stockings or socks.
(3) Hair shall be neatly groomed.

Not Acceptable

(1) Dungarees, slacks, shorts, and sundresses.
(2) Dresses, sweaters or blouses with extreme low necklines.
(3) Pin curls or curlers with or without head covering.
(4) Tight-fitting exterior garments.
(5) T-shirts or sweat shirts.

Insurance for Students

Students should be encouaged to purchase the individual student insurance now available in all schools. This is approximately $3.00 a year and is paid for by the student.

School Lunch Program

In most schools and eventually in all, a hot lunch program is provided for the student and staff. Students are urged to take advantage of this service which provides a hot, well balanced meal at a minimum cost.

The cafeteria, or other specified location is the only area in which food is to be eaten.

Under no circumstances are students permitted to leave the grounds for lunch at nearby restaurants or the like. This is a safety precaution.

Smoking Privileges

Students are not permitted to smoke in the school at any time or place. Student smoking is permitted only in an outside area approved by the school director for students who have their parents' permission.

Staff smoking durning the time the students are attending school is confined to staff rooms or conference room at times agreed upon. Care should be observed by the staff to avoid smoking in other areas immediately before or after the student day.

Excuses from Physical Education

All students are expected to participate in physical education unless excused by one of the following procedures:

(1) Written statement or certificate from the family doctor.

(2) Written statement or certificate from the school doctor.
(3) Temporarily excused at the discretion of the school nurse.
(4) Excused at the discretion of the school director.

Other activities are provided by the school for all students excused temporarily or permanently from physical education.

Fire Drills and Safety Inspection

Individual safety practices are taught in all shops. In addition the following inspections shall be made each month and reported to the central office:

(1) One or more fire drills. Give dates.
(2) Safety inspection of plant.
(3) Inspection of all lockers.

Civil Defense disaster drills shall be planned and carried out in each school.

School Closings

Connecticut vocational-technical schools will be in session on all days listed on the official school calendar except as follows:

(1) Official notice approving closing for a specific period has been received from the State Director's Office.

(2) Unusual weather conditions creating hazard which, in the director's judgement, requires the closing of the school.

  a) To prevent a "No School" announcement, arrangements should be made with the local radio station to make the announcement before 7:00 A.M. or preferably before any school bus starts.
  b) Students should be instructed to listen for vocational-technical school announcements and not to assume other school closings apply to them.

  c) Where it is impossible for all students to be reached by a "No School" signal, the students who reach school will be given instruction and those who cannot reach school will be considered excused.

(3) Upon official notice of the closing of a school for hazardous weather conditions, instructors will not be expected to report.

(4) In order to maintain the integrity of the 190 day minimum school year, all days must be made up during the school year.

Part-Day Closing Due to Storm

If the severity of a storm or slippery driving creates hazardous conditions which will become dangerous and warnings are being issued by the State Police, the director shall consult with the school bus drivers and may send home any or all students.

Under the above conditions the same action may be taken with members of the staff.

Unusual Conditions or Emergencies

Unusual conditions or emergencies may require the closing of a school for a day or a part of a day. This may be done at the discretion of the school director who, in turn, must notify the state director's office of such action.

Policy on Donations & Loans

The State Board of Education in regular session on January 8, 1964, approved the following policy on donations and loans to Vocational-Technical Schools and Technical Institutes.

1. Gifts of equipment for instructional use in the Vocational-Technical Schools and Technical Institutes may be accepted under the following conditions.
    - a. Items of over $100 in value must be approved by the State Board of Education.
    - b. Items less than $100 in value may be accepted by the school director with approval of the bureau chief.
    - c. Items which are primarily for advertising purpose rather than of instructional value are not to be accepted.
    - d. It must be clearly understood by the donor that any gift must be an outright donation with full title and control passing to the State Department of Education.
2. Gifts of money for student activities and awards may be accepted under the same general policies.
3. Loans of equipment for instructional purposes may be accepted under the following conditions.
    - a. The items must be available for use by all students in the school and not limited to members of a particular organization.
    - b. The items will be returned to the lender if desired when the instructional need no longer exists.

Policy on Special or Auxiliary Police Protection

POLICY STATEMENT

State Technical Institutes and Vocational-Technical Schools experiencing difficulties with traffic control, parking, conduct of students or vandalism by neighborhood youths during evening school hours and other night activities may request the Connecticut State Police Department or the local police department to deputize carefully selected school custodians to perform police duties within the limits of the school buildings and grounds. If this is not found feasible or desirable, the unit head may submit requests for the establishment of part-time positions in order to employ qualified auxiliary or special police officers to protect public and private property and maintain discipline within the limits of the school buildings and grounds.

NOTE: The policy statement above is based on the following State of Connecticut General Statutes:

> "Section 29-18. SPECIAL POLICEMEN FOR STATE PROPERTY. The commissioner of state police may appoint one or more persons nominated by the administrative authority of any state buildings or lands to act as special policmen in such buildings and upon such lands. Each such special policeman shall be sworn and may arrest and present before a compentent authority any person for any offense committed within his precinct."

Nothing herein should be construed as relieving the local police department from its responsibility for normal regular protection.

VT 001 702
Plan for Area Development of Vocational and Technical Education in Wisconsin.

Wisconsin State Board of Vocational and Adult Education, Madison
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 11Nov63 13p.

*VOCATIONAL EDUCATION; TECHNICAL EDUCATION; ADULT VOCATIONAL EDUCATION; *ADMINISTRATOR GUIDES; *PROGRAM DEVELOPMENT; POST SECONDARY EDUCATION; *AREA VOCATIONAL SCHOOLS; SECONDARY SCHOOLS; *STATE PROGRAMS
WISCONSIN

Additional programs in vocational and technical education need to be developed in the state of Wisconsin. Some objectives of vocational education are: (1) to provide all people within the state with an opportunity to participate in vocational, technical, and adult education on an equal basis, (2) to achieve the highest quality of educational programing and service available, (3) to make use of all available resources, (4) to utilize and present facilities, staff, and programs as the basis for development, and (5) to improve organizational and administrative structure through closer coordination and cooperation. Area schools and development of "state oriented programs" are two suggested solutions for many problems. Five basic programs existing now in Wisconsin Vocational, Technical, and Adult Schools are: (1) programs for compulsory age youth not in high school, (2) part-time adult day classes, (3) part-time adult evening classes, (4) instruction for related apprentices and full-time post high school programs, and (5) a cooperative program at the local level. All services can and must be improved and expansion should be provided on a wider geographic basis. Plans to realize such aims are approached by these means: (1) legislation of district reorganization, tuition, and state aid, (2) new state and federal aid policies, (3) establishment of standards, (4) administration and supervision, and (5) improved cooperation. Specific schools in Wisconsin are listed as to their standing or anticipated date of approval for participation in the approved degree program. (MS)

VT001 702

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ED033237

WISCONSIN STATE BOARD OF VOCATIONAL AND ADULT EDUCATION
Madison, Wisconsin 53703
C. L. Greiber, Director

PLAN FOR AREA DEVELOPMENT OF VOCATIONAL AND TECHNICAL EDUCATION IN WISCONSIN

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT 01702

Approved by the State Board of Vocational
and Adult Education - November 11, 1963

Plan for Area Development of Vocational and Technical Education in Wisconsin

A number of conditions exist or are arising which make it imperative that additional educational programs of a vocational and technical nature be developed in Wisconsin as rapidly as possible. Among these conditions, the following two seem most pressing:

1. Rapid changing technology resulting in: numerous new occupations, increased technical knowledge of the presently employed, the disappearance of unskilled and semi-skilled jobs.

2. The need for educational programs beyond the high school for ever-expanding secondary school graduating classes.

The coupling of these two conditions is creating demands for the immediate future which cannot be met unless an adequate plan is developed.

While colleges and universities are likely to be hard-pressed in handling the increasing demands made of them, they can, by admission policies alone, solve some of the problem. Such an action will result in even greater pressures on vocational and adult schools, and these schools are not prepared organizationally or financially to handle such demands.

The schools of vocational and adult education are municipal institutions designed to meet local educational needs. They are primarily financed from local tax dollars with inadequate provisions for non-resident enrollments. In most instances, the local tax dollar would be completely inadequate to provide for large and rapid expansion.

With these conditions in mind, the State Board of Vocational and Adult Education has established a plan for solving the inadequacies.

OBJECTIVES

The State Board of Vocational and Adult Education establishes the following objectives as the goal for its plan, believing they are in the best interest of the people of Wisconsin and the economic and social climate of the state.

1. To provide all people in the state with an opportunity to participate in all phases of vocational, technical and adult education on an equal basis. This is presently not true since the schools are municipal institutions and no clear legal responsibility exists for non-residents.

2. To achieve the highest quality of educational programming and service obtainable. An expansion of programs must be accompanied by an ever-improving quality of education.

3. To make the maximum use of all available resources. In developing new programs, care must be taken to see that maximum use is made of money, staff, facilities, research, and creative talent as is available.

4. To utilize present facilities, staff, and programs as the basis for development. The traditions, accomplishments, philosophy, know-how, and professional commitment as well as considerable financial investment makes expansion of the existing facilities, staff and program most desirable.

5. To improve organizational and administrative structure through closer coordination and cooperation. As problems become more complex it becomes more difficult for small units it develop adequate programs on their own. The small units must be eliminated, combined or coordinated with other units. Inasmuch as local problems may still be solved by local institutions, the continuation of some smaller ones is desirable. Cooperation and coordination must not only exist among the various schools of vocational and adult education but with other educational agencies as well.

Problems.

To achieve the above objectives requires the identification of majo problems which must be overcome. Among the problems foreseen are the following:

1. Vocational-technical and adult schools are at present municipal institutions and have minimal responsibility for education of persons residing outside of the municipality. Present legislation provides for vocational and adult schools in urban areas. "In every town, village and city over 5,000 population there should be a local board of vocational and adult education. . ." (41.15 (3) Statutes, State of Wisconsin.

   There are some legal provisions for expanding the vocational and adult schools to district or area schools, but some are at present too cumbersome to be used. A few schools have expanded their geographic base, but there is no incentive for area development.

2. Counties have a favorable economic position in not having to maintain a school of vocational and adult education. Present law provides that persons under 21 years of age will have their tuition paid by the county of residence. The amount of tuition which can be charged by a school of vocational and adult educa-

ation is $2.50 per day while the actual cost to the school is greater than this. Thus the community partially supports each non-resident student. As a result, counties are not anxious to assume vocational and adult education responsibilities. They would need to staff, equip, and maintain the building and programs at a substantially higher level of support with little help from state and federal aids.

3. State aid policies tend to support on-going programs and fail to support growth and development. State aid at present is paid on the basis of student hours. This tends to discourage development of technical classes or job improvement classes which serve relatively small groups of people. While greater state aid is paid for approved technical programs, the per-student-hour formula does not assure an adequate amount of support to the local school for programs which are primarily of a state nature.

   The per-student-hour payment does not provide for the difference in cost of programs either. Evening school costs are substantially less than full-time day program costs.

4. Federal aid policies tend to support present programs rather than promote new programs and services. Federal aid for agriculture and homemaking are used extensively to support present high school programs. Trade and industry and distributive education funds are used to promote program development for persons already employed. Relatively little money is used for equipment, research (to determine educational needs and others), guidance, teacher training, supervision, administration, or to develop pre-employment training programs.

5. Vocational, technical and adult education is not understood by many political, educational and social leaders. Vocational, technical and adult education is a complex of educational services, most of which are of extremely high quality, but some programs and services are marginal. (This varies from community to community.) In spite of there being a variety of programs and services, people tend to judge the total program on the basis of the one or two aspects with which they have had contact. Thus, educators see the vocational and adult schools as a school for compulsory youth. Persons in industry and business measure the schools on the basis of apprentice programs and part-time job-upgrading programs. The result is that the image is a "muddy" one and may be favorable or unfavorable, depending on one's view and experience.

These are five significant problems. There are many others; among them are:

1. There is opposition to the expansion of vocational, technical and adult education from some groups of people who feel such a development would be a threat to the growth of other programs.

2. The whole tax structure with the present emphasis on local property tends to place severe limitation on the available financial resources.

Area Schools, A Solution

Each community in the state has certain vocational and technical education needs, based on its economy and people. To meet these needs, there should exist, as there does today, an agency which is in constant touch with the people of the community. The existing agency is the local board of vocational and adult education and its administrative staff and teachers.

But there are other educational needs as well. Certain occupations have limited employment opportunities and these opportunities are not found in just one or two communities. In such instances, the state or a large geographic region becomes the beneficiary. It seems that in such instances the support and development of these courses should not be placed on a local board but becomes a total state responsibility.

An organizational plan should provide for the continuation of a local agency to provide for "locally oriented" programs. It should also provide for the development and support of what might be referred to as "state oriented programs."

A logical development which is occurring in many states and has slowly developed in Wisconsin is the area school of vocational technical and adult education. The development in other states is occurring in various ways. Some states have established a highly organized system of area vocational-technical schools. Georgia is frequently pointed to as an example of this. Their state plan, calling for 26 centers, has been adopted by the State Board of Education and supported by the legislature. Many of these schools are operational, and the others are in the planning stage. The schools are operated under a local board of education and are financed (building, equipment and institution) by both state and local funds. No tuition charge is made to any students. Programs offered are for high school youth, out-of-school youth and adults, persons seeking advancement on their job, and persons enrolled for evening classes. Two state-owned-and-operated schools exist as well.

North Carolina has a similar network of schools, but limits its high school enrollment to selected seniors. Extension centers in various high schools provide vocational education to other high school students. One half of the operating cost is paid by the state.

New York operates vocational-technical schools in several ways: through expanding urban schools, by expanding small city schools to include suburban districts, by establishing geographic centers to serve rural high school youth, and by paying tuition of students who do not have vocational-technical education available. These primarily serve high school youth.

Connecticut offers a full high school level program in 14 area vocational-technical schools under boards of education. Two other state-operated schools offer post high school education programs.

California offers post high school vocational-technical programs through 75 locally managed junior colleges. An inter-area attendance agreement permits specialization by institutions.

The variety of organizational plans is as great as the number of states with area schools. Area schools are also designed for different purposes, some to provide high school students with vocational-technical education, some are exclusively post high school vocational-technical in nature. Wisconsin, because of existing conditions, should be able to develop its own organizational plan. This would include maintaining and improving the present vocational and technical program and expanding to include services to large geographic regions or the entire state.

Five basic programs exist in Wisconsin Vocational, Technical and Adult Schools. The first three of these are local in nature and require local attention. They are:

1. Programs for compulsory age youth not in high school attendance.

2. Day part-time adult classes.

3. Evening part-time adult classes.

Two services are of a state character. They are: instruction for related apprentices and full-time post high school vocational and technical programs.

One other service has been assumed as a responsibility by a substantial number of vocational and adult schools and this is a cooperative program with the local high school permitting boys and girls to obtain vocational courses for high school credit. This is more of a local responsibility.

All of these services can and must be improved.

Area Schools in Wisconsin.

Many characteristics of area vocational-technical schools exist in Wisconsin at present.

1. Eight schools have been approved to offer state-wide associate degree programs and nine others have assumed this responsibility for programs of a state-wide orientation at their own initiation.

2. There exists a tuition arrangement, which, though limited, theoretically makes vocational and technical education available to most of the people of Wisconsin.

3. The apprentice program has been organized as a state-wide service, but these plans are inadequate. Most local communities are reluctant to expand to serve non-resident students because the community must absorb the building costs and a large portion of operating costs. The tuition arrangement is inadequate, and state and federal aid offers little relief to the expanding program.

The need for area schools is based upon the availability of students and financial resources. Studies show (appendix I) that post high school programs operate most efficiently when certain minimum standards relative to student load size and available finances are established. On the basis of these considerations, it is believed that at least two-hundred full-time students should be the potential enrollment for a minimally efficient program. The cost per student per year would be about $850*; thus a minimum budget requires $170,000. The cost of evening school, part-time adults and compulsory age programs would increase the budget to about $250,000. Presently, with 20% of this being supplied by state and federal aid and another 8% from tuition and fees, $165,000 would need to be obtained from the property tax. At two mills, this would require an equalized evaluation of $82,500,000. Relatively few communities can provide this and they shouldn't be expected to. Since the bulk of the cost is for state oriented programs, a larger share should be provided through state and federal aid. This would tend to balance the inequity in the present tuition law and place the whole financial situation into balance.

In regard to the size of potential enrollment, about 7% of the present high school graduates are enrolling in full-time vocational-technical programs. To provide 200 students now would require 3,000 high school seniors in a given area. Normally this number of seniors is derived from a population of 100,000 to 150,000 persons. This latter factor places a restriction on the number of programs which can be sustained in the state.

There are other factors to be considered too.

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* Education for a Changing World, Technical Training in the United States.

A major reason for area schools is to bring vocational-technical education within relatively easy reach of all people. Therefore, the geographic location must be considered. Estimates of reasonable distance for travel one way for day time attendance in post high school programs are placed at about 30 miles. Attendance by persons beyond this distance drops off rapidly. For part-time day and evening programs, 15 miles seems a reasonable maximum. However, many part-time day and evening programs could be operated through an extension service by the area school.

Another consideration of location is to provide service to high schools. A broader opportunity for high school youth can be provided through one centralized facility than through several small units.

Finally, because Wisconsin's Vocational and Adult system has an existing program which includes many relatively small units, these can be brought into the picture on a cooperating basis and could continue to develop and serve through "locally oriented" programs.

Summary

The essential goals of a plan for expansion of vocational, technical and adult education is to provide an educational system in strategically located geographic areas which have an adequate population, placing responsibility for development on an existing school which will establish a cooperative relationship with schools in the areas, providing a program of state aid which would support at a relatively high level, all "state oriented" programs; and establishing a plan of evaluation and approval to assure continued high quality programs and services.

The Plan

I. Vocational - Technical Areas

The State Board will be responsible for establishing areas based upon such criteria as they may determine desirable. (See map for tentative proposals.) The process for the establishment of a vocational-technical area will include:

A. A determination of area to be served, agreed upon by citizens in the area and the vocational and adult boards involved.

B. A survey of the area to determine what educational needs exist, whether adequate support can be achieved, and whether facilities exist or can be made available.

C. A central school will be identified and agreed upon if one exists. If not, a location will be determined.

D. A plan will be submitted to an evaluating committee; the plan to include a listing of programs to be developed; the system of administration, coordination and supervision to be sustained; a statement of policies of cooperative practices to exist among schools in the area.

E. Recommendation of the evaluating committee will be submitte to the State Board for action, and such other information as is desirable.

II. Vocational and Adult School Districts

Present vocational and adult schools will need to expand their locally oriented programs to serve a large population and geographic area. Some will remain municipal institutions; others will expand to be coterminous with one or more common or unified high school districts. Some may establish the county as a basis, and others may be as large as several counties (the last possibility would probably result in a vocational and adult school district and the vocational-technical area being coterminous.) These shall be subject to the review and approval of the State Board of Vocational and Adult Education.

Steps to be Taken

Continual careful study and review should be made of state and local needs, with constant evaluation of progress being made. Changes in the plan should be made when projected results do not materialize.

There are several approaches which should be taken to make this area plan a reality.

I. Legislation

A. Reorganization

District or area school laws will need improvement. The ultimate goal will be to have all of Wisconsin in vocational-technical areas which have some financial responsibility for the services provided. Different areas of the state would approach this in different ways. In sparsely populated areas, the county would be the most logical basis for development, while in more populus areas, several school districts would serve better as a base. These two possibilities are not incompatible. Where a possible overlap may arise, parts of a county may be attached to new districts.

Locally oriented programs must also be made available to all persons. District schools could enable this. This would be a step in an evolutionary process of getting all Wisconsin into vocational-technical districts.

B. Tuition Laws

It is desirable to have:

1. A tuition law based upon actual costs after state and federal aids have been deducted

2. A central state fund to cover tuition

3. No tuition

A maximum fee as is presently existant soon becomes inadequate.

C. State Aid Laws

The state aid formula needs revision. Area development would speed up greatly if funds were made available for a high support of state oriented programs, particularly at their initiation. The purchase of equipment, contributing to building, the development of curriculum, payment of administrative costs and teachers salaries must be considered. When state aid for state oriented programs is relatively high, the problem of tuition based upon costs is greatly reduced.

II. New State and Federal Aid Policies

Policies of distribution should reflect the effort to develop and expand "state oriented" programs. The use of funds for research, for improved student and financial accounting, increased supervision, initiation of programs, buildings and equipment, and for auxiliary services (guidance, teacher training, etc.) needs to be considered.

III. Establishment of Standards

Quality educational programs must be assured. The increased complexity of modern education makes this difficult. Teacher qualifications, class load, teaching techniques, efficiency and appropriateness of building, availability of related educational services, and other factors which influence educational quality must be held to a high standard and evaluation procedures need to be improved. Systems for up-grading and up-dating must be found.

IV. Administration and Supervision

As educational responsibilities change and grow, new administrative practices and organizational patterns need to be developed. Continual contact with the community and state must be sustained, but perhaps in new ways. Well trained personnel with a variety of educational specialties need to be employed. The tendency for occupational groups to overlap traditional vocational program boundaries suggests a change is needed in traditional organizational patterns at the state, area, and local level.'

V. Increased Cooperation

It becomes increasingly difficult for small educational units to provide for all vocational-technical educational needs. The relationship among vocational and adult schools and with secondary schools, colleges and universities should be greatly strengthened. Membership of the State Board on the Coordinating Committee of Higher Education may be of some help. Similar concepts of coordination might be utilized in local communities or in geographic areas.

VI. Public Image

A much better public image will result as quality programs continue to develop. This will need to be supplemented by a program of public information. A coordinated activity within the schools and from the state office should be developed.

Each of these six activities need to be developed and studied in depth with specific suggestions developed and agreed upon. Study committees of directors, state staff, and such research services as can be made available should all be utilized.

Schools Assigned State Oriented Programs

1. In cooperation with approved degree programs.

Appleton
Eau Claire
Green Bay
Kenosha
Madison
Milwaukee
Oshkosh
Wausau.

2. Approved but not operating approved programs.

    Manitowoc
    Superior
    Waukesha.

3. To be evaluated during school year 1963-64.

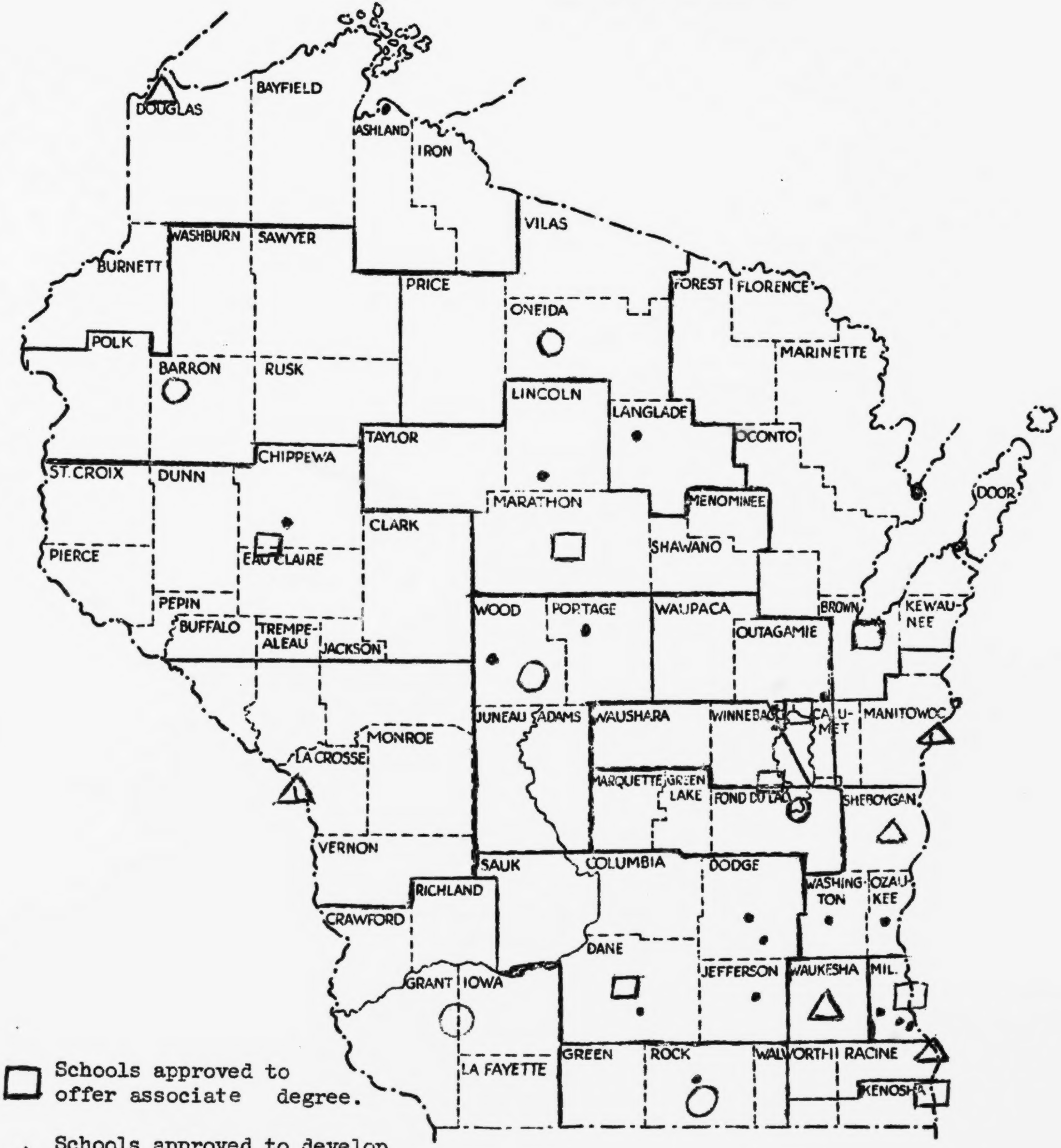
    La Crosse
    Racine
    Sheboygan.

4. Schools with potential and estimated date of approval.

Fond du Lac	1964
Southwestern Wisconsin	1967
Beloit-Janesville	1965
Rhinelander	1968
Rice Lake	1968
Wisconsin Rapids	1968.

1963 Area Plan

Schools of Vocational, Technical and Adult Education


DOUGLAS
BAYFIELD
ASHLAND
IRON
VILAS
WASHBURN
SAWYER
BURNETT
PRICE
ONEIDA
FOREST
FLORENCE
POLK
BARRON
RUSK
MARINETTE
LINCOLN
LANGLADE
TAYLOR
OCONTO
ST. CROIX
DUNN
CHIPPEWA
MENOMINEE
DOOR
MARATHON
CLARK
PIERCE
EAU CLAIRE
SHAWANO
PEPIN
BUFFALO
TREMPEALEAU
JACKSON
WOOD
PORTAGE
WAUPACA
OUTAGAMIE
BROWN
KEWAUNEE
JUNEAU
ADAMS
WAUSHARA
WINNEBAGO
CALUMET
MANITOWOC
MONROE
LA CROSSE
MARQUETTE
GREEN LAKE
FOND DU LAC
SHEBOYGAN
VERNON
SAUK
COLUMBIA
DODGE
WASHINGTON
OZAUKEE
RICHLAND
CRAWFORD
DANE
GRANT
IOWA
JEFFERSON
WAUKESHA
MIL.
LA FAYETTE
GREEN
ROCK
WALWORTH
RACINE
KENOSHA

□ Schools approved to offer associate degree.

△ Schools approved to develop associate degree programs or in process of approval

○ Schools with potential for associate degree programs

• Cooperating day schools.

VT 001 728
Plan for Area Vocational-Technical Education in Jackson County.

Jackson Community Coll., Mich.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 1Jul65 33p.

*VOCATIONAL EDUCATION; *TECHNICAL EDUCATION; *PROGRAM ADMINISTRATION; *CURRICULUM; EDUCATIONAL FINANCE; POST SECONDARY EDUCATION; PHYSICAL FACILITIES; POPULATION TRENDS; SECONDARY EDUCATION; *EDUCATIONAL PLANNING; STUDENT ENROLLMENT; EMPLOYMENT PATTERNS; ADULT VOCATIONAL EDUCATION; MANPOWER NEEDS
JACKSON COUNTY; MICHIGAN

This plan was to assist the educational units to do the following: (1) maintain, extend, and improve programs of vocational education, (2) develop new programs of vocational education, and (3) provide part-time employment for youths who need the earnings from such employment to continue their vocational training on a full-time basis. These educational opportunities are also to be made available to adults. The topics discussed include: (1) employment needs, (2) population information, (3) types of vocational education classes, (4) procedures, (5) program of instruction, (6) plan for administration, (7) initial physical facilities, and (8) funding. (SL)

VT001 728

ED033 237

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PLAN FOR

AREA VOCATIONAL-TECHNICAL EDUCATION

IN

JACKSON COUNTY

Jackson Community College

Dr. W. N. Atkinson, President

July 1, 1965

VT 01238

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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PLAN FOR
AREA VOCATIONAL-TECHNICAL EDUCATION
IN
JACKSON COUNTY

Board of Trustees

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July 1, 1965

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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THE PLAN FOR AN AREA VOCATIONAL-TECHNICAL EDUCATION PROGRAM FOR JACKSON COUNTY SCHOOL DISTRICTS

1.0 Introduction

The purpose of this plan for area vocational technical education for Jackson County is to assist all educational units within the designated geographical area to maintain, extend, and improve programs of vocational education; further, to develop new programs of vocational education, and to provide part-time employment for youths who need the earnings from such employment to continue their vocational training on a full time basis, so that persons of all ages in all school districts of the county - those in high school and in Jackson Junior College, those who have completed or discontinued their formal education and are preparing to enter the labor market, those who have already entered the labor market but need to upgrade their skills or learn new ones, and those with special educational needs that may benefit from appropriate training - will have ready access to vocational-technical training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training. Further, these educational opportunities must also be made available to adults who desire to retrain themselves in skilled or semi-skilled trades and occupational areas, and/or who desire to fit themselves for new jobs emerging from a new, changing, ever-accelerated economy.

1.1 Development of this proposal shall be in accordance with the State Plan for Vocational Education in Michigan. It shall provide for any or all of the following purposes:

1.11 Vocational education for persons attending high school.

1.12 Vocational education for persons who have completed or left high school and who are available for full-time study in preparation for entering the labor market.

1.13 Vocational education for persons who have already entered the labor market and who need training or retraining to achieve stability or advancement in employment.

1.14 Vocational education, when appropriate and possible, for persons who have special needs that prevent them from succeeding in the regular vocational education programs.

1.15 Construction of area vocational-technical education center facilities.

1.2 Definitions

1.21 Vocational education means vocational or technical training or retraining available under public supervision and control; further, all programs shall be developed so as to be eligible for reimbursement under contract with the Department of Public Instruction, Division of Vocational Education.

1.21-1 Programs of vocational education shall be conducted as part of a program designed to fit individuals for gainful employment as semi-skilled or skilled workers or technicians in recognized occupations.

1.21-2 The term includes vocational guidance and counseling; instruction related to the occupation for which the person (student, adult) is being trained.

1.22 Area Vocational-Technical Center as used in this proposal shall be available to residents of Jackson County and to the residents of the Intermediate School District. Further, it shall admit as students persons who are attending high schools, local community college students, persons who have completed high school, and those who have left school, and have expressed a willingness and have the means to participate in the area center educational programs.

1.3 Course Offerings Availability

In Jackson County, and the Intermediate School District, very little occupational education and training exists. This center, for all individuals, must be comprehensive enough to provide for total occupational preparation, regardless of level.

1.31 Primary attention shall be given to the development of appropriate marketable skills, and where necessary, appropriate technical competencies. For those students who come from schools with extensive course offerings it will be an extension of the acquired abilities, for others with little or no developed abilities it shall be a complete program.

1.4 Objectives

1.41 General

1.41-1 Development of good citizens.
1.41-2 A marketable degree of skill.
1.41-3 Reasonable degree of social competency.

1.42 Specific

1.42-1 To offer training in specific skills to non-baccalaureate degree bound students.
1.42-2 To provide training or retraining to workers whose skills and technical knowledge must be updated.
1.42-3 To provide training or retraining to workers whose present jobs will change due to automation or economic conditions.
1.42-4 To complement available public education by offering specialized training at the high school or post-high school level.
1.42-5 To provide related instruction for apprentices, journeymen, and to assist in the development and improvement of supervisory personnel in all areas served by vocational-technical education.
1.42-6 To provide a wide variety of course offerings based upon the occupational needs of students regardless of where they seek employment in this geographical area.

1.42-7 To assist high school students and drop outs to complete requirements for a high school diploma.

2.0 Employment Needs

Vocational education is concerned with todays preparation for tomorrow's employment and its ultimate success is keyed to employment opportunities. Jackson County, once largely an agricultural area, has gradually shifted over the years until now it is a county accommodating approximately 2300 employers in business and industry. Thus, employment opportunities have been and are being created for qualified youth. Yet, very little has been done to provide appropriate vocational education for those individuals who need and desire it.

Vocational education opportunities for youth-in-school and/or out-of-school, adults, others - in Jackson County are extremely limited.

Jackson County is experiencing a steady growth in small and medium-sized business and industry. Available data indicates that this trend will continue.

The growth of business and industrial firms will require many skilled individuals in all areas. It is necessary for students and adults alike to prepare for jobs and job advancement.

Interviews with local industry revealed the following:

> Industrial and business growth and development require qualified skilled people (youth, adults). 75 to 80% of the manufacturing employers requiring employees trained in skilled trades, must recruit them outside the county.
>
> Engineering facilities in Jackson County require trained technicians. 75 to 80% of the manufacturing employers requiring trained technicians must recruit them outside the county.
>
> High school graduates with trade and technical training would be given preference in employment. 60 to 70% of the manufacturing employers would give preference in hiring to those with vocational training.
>
> Occupational opportunities for high school youths who leave school before graduation are limited. 85 to 90% of employers in Jackson County demand high school graduation as minimum for employment. Yet practically all pupils who leave high school before graduation seek immediate employment without vocational preparation.

A majority of the employers in Jackson County believe high schools have only partially met their needs. About 40% of those who graduate from high school go directly to work with little or no specific preparation for employment.

Rapid technological development and the increasing complexity of industrial provesses demand continuous improvement in skill and technical knowledge of people on the job for whatever occupational training they receive.

Well organized vocational training opportunities in business and industry are limited to a very few establishments. Less than 6 or 7% of the manufacturing industries in Jackson County provide a formal organized training program for new employees.

2.1 Where People Work in Jackson County - Distribution by % *

Professional, Technical	10%
Managers, Proprietors	8%
Clerical	15%
Sales	8%
Craftsmen, Foreman	17%
Operatives	25%
Service	11%
Laborers	4%
Farmers	2%
	100%

*Statistics provided by Michigan Employment Security Commission

2.2 Distribution Of 1960 Employment In Michigan By Major Occupational Areas *

42%	Craftsmen & Technicians
15%	Sales
15%	Clerical
4%	Agriculture
8%	Professional (College Degrees)
16%	All Other

2.3 Anticipated Increase In Labor Force In Jackson County *

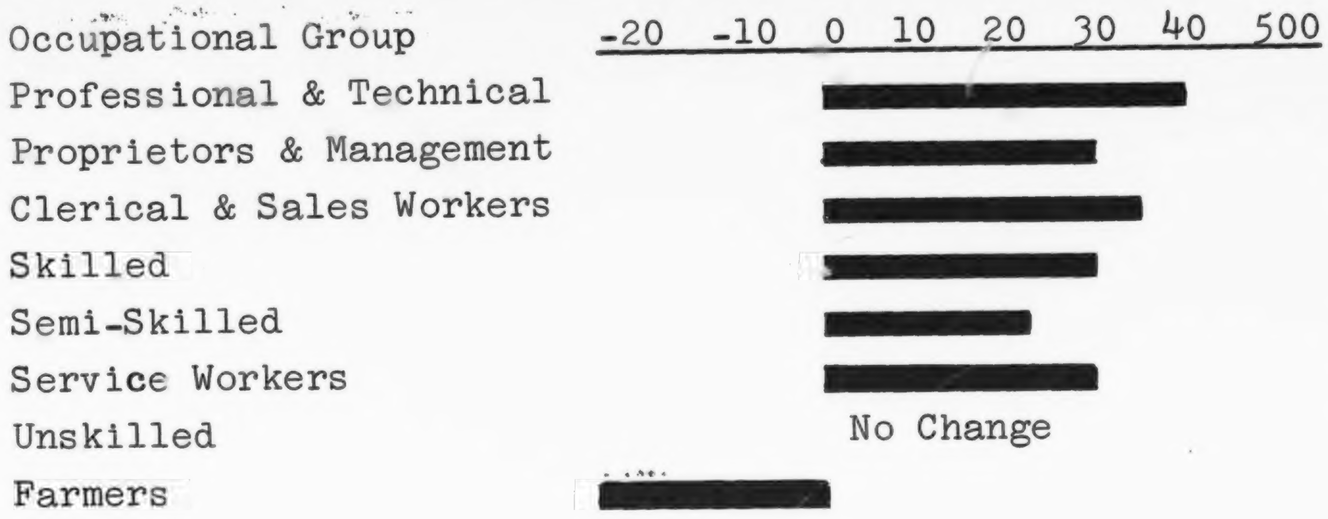
Professional, Technical	65%
Managers, Proprietors	20%
Clerical	50%
Sales	35%
Craftsmen, Foreman	30%
Operatives	25%
Service	50%
Laborers	No Change
Farmers	-20%

* Statistics provided by Michigan Employment Security Commission

2.4 Occupations Needing People - As Noted by Request for Manpower Development Training Programs In Michigan - From 1962 - 1964 - Percentage & Number Distribution *

Occupation	No. of Projects	% of Projects
Trade & Industry		
Machine Tool Operator (General)	26	20%
Auto Mechanics (various levels)	19	15%
Welder (combination)	9	7%
Auto Body Repair	7	6%
Cooks	6	5%
Business		
Clerk-Stenographer	10	29%
Clerk-Typist	8	23%
Stenographer	6	17%
Health		
Nurse Aide - Orderly	16	50%
Practical Nurse	11	35%

2.5 Anticipated Percent Change In Employment From 1960-1970 *



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* Statistics provided by Michigan Employment Security Commission

3.0 Population Information

3.1 High School Districts Included In Intermediate School District - Jackson County

Brooklyn
Cement City
Concord
East Jackson
Grass Lake
Hanover-Horton
Jackson Union
Michigan Center
Napoleon
Northwest
Springport
Vandercook Lake
Western

3.2 Student Number *

3.21 Enrollment In Senior High Schools of Jackson County 1963-1964

Twelfth Grade	Eleventh Grade	Tenth Grade	Ninth Grade	Eighth Grade
1860	2313	2448	2432	2515

3.22 Percent of High School Graduates Enrolled in College

	1950	1955	1960
Michigan Public High Schools	24	31	34
Michigan Private High Schools	un-available	36	44
Jackson County Public High Schools	29	30	41

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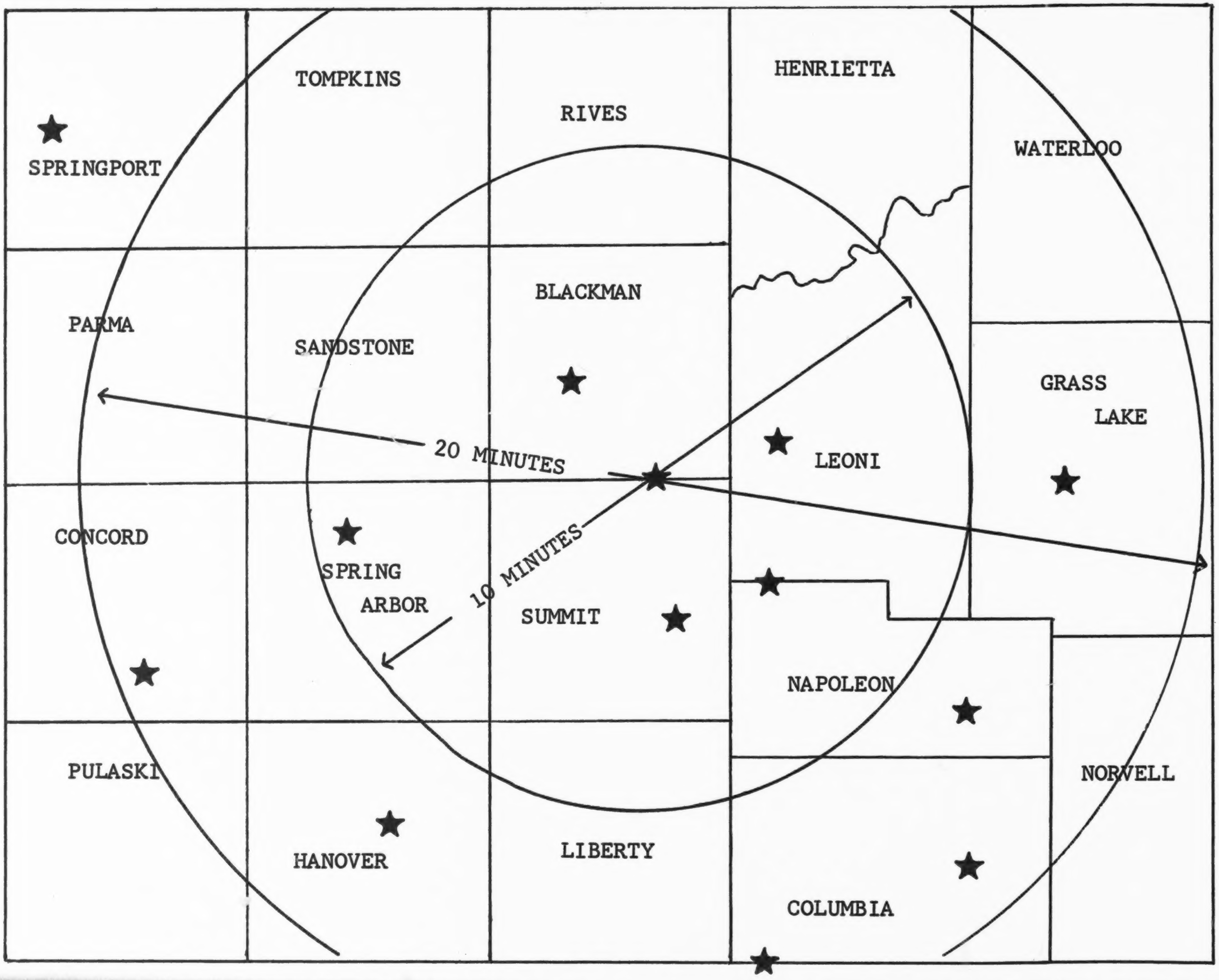
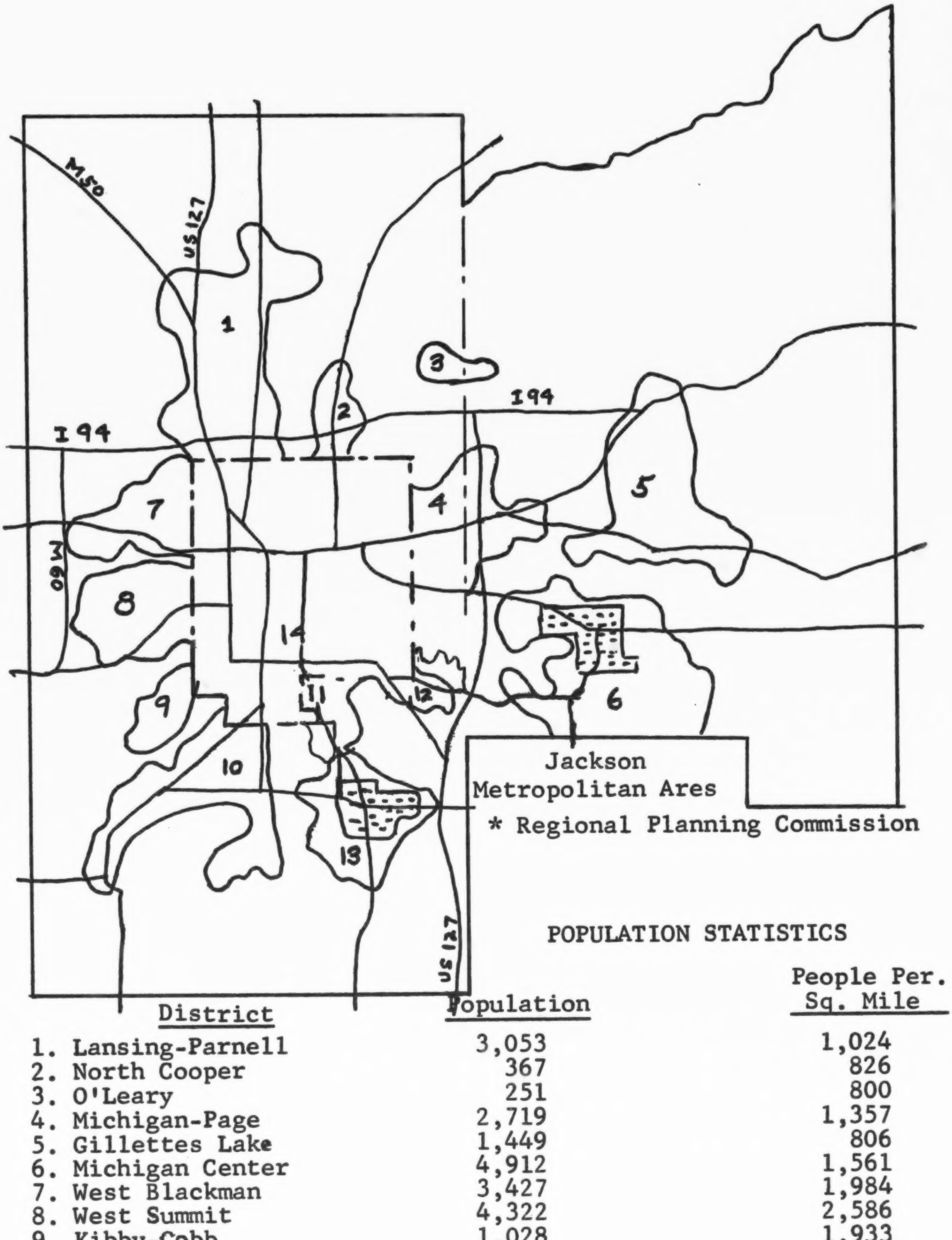
* Statistics - Jackson County Intermediate School District

JACKSON COUNTY - HIGH SCHOOL LOCATIONS - INDICATED DRIVING TIME


TOMPKINS
RIVES
HENRIETTA
SPRINGPORT
WATERLOO
PARMA
SANDSTONE
BLACKMAN
GRASS LAKE
LEONI
20 MINUTES
CONCORD
SPRING ARBOR
10 MINUTES
SUMMIT
NAPOLEON
PULASKI
NORVELL
HANOVER
LIBERTY
COLUMBIA

WHERE MOST PEOPLE LIVE *



Jackson
Metropolitan Ares

* Regional Planning Commission

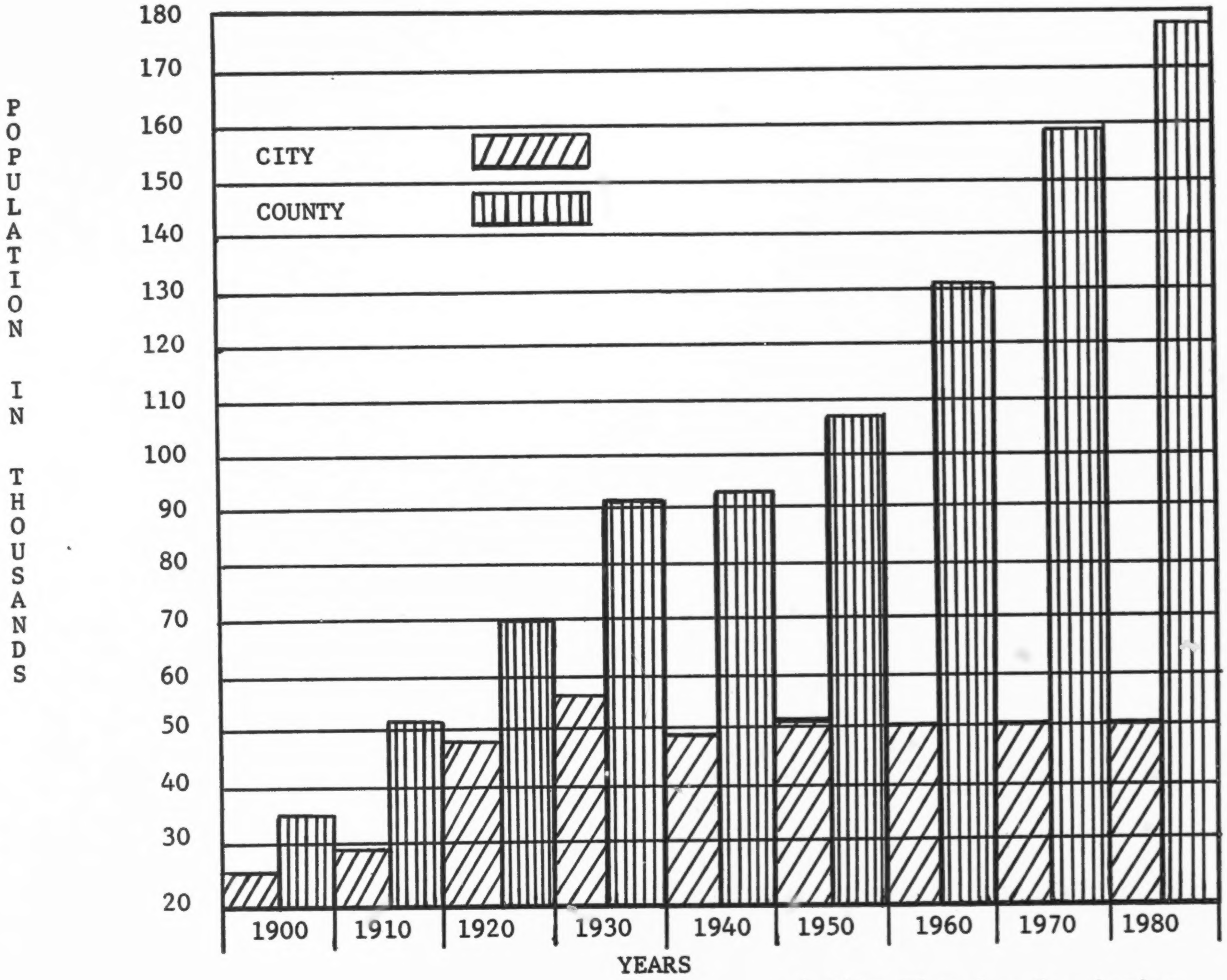
POPULATION STATISTICS

District	Population	People Per Sq. Mile
1. Lansing-Parnell	3,053	1,024
2. North Cooper	367	826
3. O'Leary	251	800
4. Michigan-Page	2,719	1,357
5. Gillettes Lake	1,449	806
6. Michigan Center	4,912	1,561
7. West Blackman	3,427	1,984
8. West Summit	4,322	2,586
9. Kibby-Cobb	1,028	1,933
10. Southwest Summit	2,614	1,088
11. Southlands	2,303	3,904
12. Uplands-Schelling	658	1,293
13. Vandercook Lake	4,918	2,330
14. City of Jackson	50,720	4,742
Total	82,743	2,688

INTERMEDIATE SCHOOL DISTRICT - JACKSON COUNTY
MEMBERSHIP 1963 - 1964

District	K	1	2	3	4	5	6	7	8	9	10	11	12	Total
Brooklyn	82	90	61	94	70	68	77	74	76	63	60	63	59	937
Cement City	44	56	43	34	39	45	42	48	41	38	40	37	30	537
Clark Lake	12	8	12	14	12	11	11	10	11					101
Concord	74	77	86	81	96	76	91	68	84	85	66	54	53	991
East Jackson	156	145	110	130	119	105	104	128	93	137	130	149	93	1598
Grass Lake	76	82	74	93	69	83	76	73	83	57	68	67	46	947
Hanover-Horton	85	91	79	69	69	62	91	71	73	83	64	62	43	942
Henrietta	63	56	61	63	55	57	38	50	32					475
Michigan Center	174	168	155	124	145	149	123	148	115	175	162	161	123	1922
Napoleon	126	142	139	122	126	139	108	103	118	112	118	96	72	1521
Northwest	244	198	239	227	210	185	208	195	166	166	171	165	109	2483
Springport	75	93	62	80	72	68	70	67	73	75	69	65	50	919
Vandercook Lake	149	135	132	133	120	114	108	127	120	98	106	92	56	1490
Western	176	152	162	151	156	136	136	142	116	114	88	129	114	1766
Concord 4F	4	3	2	5	5	7	5							31
Parma 3	5	5	4	4	3	1	4							26
Parma 4F	3	4	6	1	3	1	1							19
Parma 5F	4	3	1	2	2	4	5	5	2					28
Wright	10	10	8	11	10	5	4							58
Parma 6	2	1	5	1	2	0	4	2	2					19
Island	5	2	2	4	0	0	3	0	1					17
Gravel	13	3	11	8	7	8	9	7						66
TOTAL	1576	1524	1454	1451	1389	1324	1318	1318	1206	1283	1142	1140	848	16893
UNION	1449	1178	1067	1012	984	976	933	906	919	894	998	906	715	12937
Parochial	19	515	499	479	460	457	477	422	390	335	308	267	243	4871
Special Ed.														642
GRAND TOTAL	3044	3217	3020	2942	2833	2757	2728	2646	2515	2512	2448	2313	1806	35343

JACKSON COUNTY POPULATION TRENDS *
1900 - 1970



* City Planning Commission

3.7 Number of Eighteen Year Olds In Michigan *
1960 - 1976

Year	18 Yr. Olds
1960	107 041
1961	108 672
1962	99 101
1963	97 334
1964	120 335
1965	139 177
1966	133 687
1967	135 802
1968	138 624
1969	148 287
1970	153 649
1971	157 246
1972	165 978
1973	169 343
1974	178 043
1975	179 766
1976	175 124

* Information by Citizens Committee on High Education

4.0 Types of Classes

Types of classes to be developed in Distributive Education, Office Education, Trade & Industrial Education, Technical Education, Health Education, and other occupational areas, shall include preparatory, supplemental, and cooperative classes.

4.1 Preparatory Classes

Occupational training may be provided regardless whether or not the persons enrolled are employed. Training may be offered for any length of time. Such classes are organized only for (1) persons over eighteen years of age or (2) persons 16 who have left the full time school, or persons over 16 who are regularly enrolled in a full-time day school and are preparing to enter single skilled or semi-skilled occupations. Such classes may be operated for less than 9 months per year, for less than 30 hours per week. Further, there shall be no requirement that a minimum of 50 percent of the school time must be given to manipulative work on a useful or productive basis.

4.2 Supplementary Classes

Classes conducted during the non-working hours of the enrollees. The class may enroll only workers 16 years of age or older who are employed. The instruction is limited to that which will enhance the skill or knowledge of the worker in apprenticeship, trade, or occupation.

4.3 Cooperative, Part-time

Such cooperative school-occupational training classes will be conducted for persons who have reached the age of 16 years and are enrolled in a cooperative occupational training program. Alternate days, weeks, months, or other periods in school and on the job may be substituted for the half-day in-school and half-day on-the-job plan. Trainees shall be employed in appropriate occupations at least as much time as is spent in school with an average minimum of 15 hours per week. Trainees shall be paid at monetary wage as student learners, and their employment must conform to State and Federal Laws governing employment.

5.0 Procedures

5.1 The Area Vocational Technical Center shall provide for cooperative arrangements between the center and the Michigan Employment Securities Commission.

5.11 Michigan Employment Securities Commission will make available occupational information regarding reasonable prospects of employment in this geographical area and elsewhere in the State and Nation.

5.11-1 Center would use such information in providing guidance and counseling to students and prospective students.

5.11-2 Center would use such information in determining the occupations for which persons are to be trained.

5.12 The center will make available information regarding the occupational qualifications of persons having or completing courses to the Michigan Employment Securities Commission.

5.2 Students who are regular members of a high school district will be enrolled in the area vocational-technical center only for occupational preparation on the request of the district superintendent.

5.3 Out-of-school youth under 18 who have not completed high school, shall be enrolled as students of the high school district in which they reside.

5.4 All other students, shall enroll in the area center in a student status determined by their preparation and program.

5.5 Qualifications for enrollment will be based upon interest, aptitude, and ability to profit from instruction.

5.6 Students must be carefully selected through sound guidance techniques.

5.61 Aptitude tests.

5.62 Evaluation of school records.

5.63 Personal interviews.

5.7 Students must identify occupational objectives.

5.8 The Area Vocational-Technical Center shall accept responsibility for:

- 5.81 Reporting student progress.
- 5.82 Making reports as required.
- 5.83 Fiscal control and fund accounting procedures as may be necessary to be in compliance with recommended procedures.
- 5.84 Keeping the Plan for area vocational-technical education in agreement with the requirements of the State Board of Control for Vocational Education.

5.9 Curriculum

Function of curriculum shall be to provide education and training to develop skills, abilities, understanding, attitude, working habits and appreciation, and to impart knowledge and information needed by workers to enter and make progress in employment on a useful basis. These curricula shall be considered as an integral part of a total educational program.

While vocational education is specific in purpose (to enter and make progress in employment) the instructional content will be broadly conceived and developed as preparation for an occupation, whether the level be semi-skilled, skilled, craft or technical occupations involving many basic skills for a wide variety of machines, equipment, tools, and responsibilities.

5.91 Distributive - Distributive education to provide instruction for salesmanship, store display, advertising, store management and mid-management positions as preparation for beginning employment in selling, retailing, distribution, and etc. Programs to be offered in grades 11 & 12, community college, and for adults.

5.92 Office - Office education to provide instruction for office positions including the operation of business machines, data processing, programming and key punch operation, business correspondence, and associated equipment, and general clerical work. Programs to be offered in grades 11 & 12, community college and for adults.

5.93 Trade - Trade education to provide for a program of courses to prepare students for entrance into semi-skilled, skilled, crafts, and as advanced apprentice or on-the-job trainees. Regardless of the occupational area, emphasis is on hand skills, machine operations, instrumentation, supplemented with trade information and related instruction. Programs - to be offered in grades 11 & 12, community college and for adults.

5.94 Agriculture - Agriculture education a program of courses designed to meet the needs of individuals who have entered upon or are preparing to enter any occupation involving knowledge and skills in agricultural subjects. Programs to be offered in grades 11 & 12, community college, and for adults.

5.95 Home Economics - Home Economics education a program of courses designed to meet the needs of individuals who have entered upon or are preparing to enter any occupation involving knowledge and skills in home economics subjects. Such occupations include those which provide wage-earning services in the home and community and to occupations which are related to the broad field of home economics. Programs to be offered in grades 11 & 12, community college and for adults.

5.96 Technical - Technical education to provide instruction in courses intended to prepare selected students for entrance directly into technical or semi-professional occupations. Regardless of the occupational area, emphasis is placed on appropriate technical subjects, mathematics, drafting, and some science, includes theory and extensive laboratory experiences, drawing, and manipulative activities. Programs to be offered to selected students in Grade 12; community college and adults.

6.0 Program of Instruction

The term program implies a curriculum approach to education in the area center which shall include a series of sequential courses within specific occupational areas of subject matter concerned clearly defined.

6.1 Purpose: To meet the expanding educational needs of occupations and to meet the career plans of youth and adults. Occupational education shall be organized so as to permit the enrollment of all persons who have occupational goals regardless of level.

6.2 Course Offerings: Primary attention shall be given to the development of the appropriate occupational competencies and, where applicable, for technical competency. The need for technical competencies will be illustrated by the desirable as well as the employable relationships of the occupation to education.

6.3 Course titles will indicate in a general way the nature of the materials to be conveyed. Course content will be determined by an analysis of the job or occupation for which the training is intended.

6.4 Programs

6.41 Distributive education, a program of courses offering instruction and occupational preparation and training in:

Distribution
Marketing
Management

Distributive occupations are defined as those followed by managers, proprietors or employees engaged primarily in marketing or merchandising goods, and as services in business establishments including retailing, wholesaling, manufacturing, storage, transporting, financing, risk bearing, etc.

6.41-1 Some Occupational Areas for Employment
Financial Service Occupations
Retail Occupations
Sales Supporting Occupations
Service Occupations

Wholesale Occupations

6.42 Office Education

Office education is a program of vocational education offering instruction and occupational preparation and training for the office occupations; develops skills and understandings used in business and in the utilization of the services of the business community.

6.42-1 Some Occupational Areas for Employment

Banking and Finance
Credit
Insurance
Law
Real Estate
Utilities
Industry
Business

6.43 Trade and Industrial Education

Trade and Industrial Education is a program of vocational education designed to train or retrain an individual for gainful employment in business or industry, accenting manipulative skills and technical knowledge necessary for satisfactory performance on the job.

6.43-1 Some Occupational Areas for Employment

- Mechanics
  - Power Plant (FAA)
  - Automotive (various occupational levels)
  - Appliance Service
  - Diesel (Service)
- Draftsman
- Mechanics
- Foods
- Machinist (various occupational level)
- Radio and Television Service, (entrance level only)
- Welding (various occupational levels, (various types)
- Practical Nursing

6.44 Agriculture Education

Agriculture education is a program of occupational centered education designed to train or retrain an individual for gainful employment in agriculture accenting the necessary skills and technical knowledge necessary for staisfactory performance on the job.

6.44-1 Some Occupational Areas for Employment

Farm Machinery industries
Farm suppliers
Food processing
Complex of activities on and off the farm known as "agriculture business".

6.45 Home Economics

Home Economics is a program of occupational centered education designed to train or retrain an individual for gainful employment in home economics, accenting the necessary skills and technical knowledge necessary for satisfactory performance on the job.

6.45-1 Some Occupational Areas for Employment.

Undetermined at this time.

6.46 Technical Education

Technical education is a program of vocational education designed for training persons for employment as highly skilled technicians in recognized occupations requiring scientific knowledge in fields essential to national defense. Such instruction is concerned primarily with the application of technical knowledge and understanding in contrast with manipulative skill.

6.46-1 Course Content

Length of class or classes, and instructional procedures are based on an analysis of the job or cluster of jobs for which training is given.

6.46-2 Preparatory courses are designed to prepare persons for useful employment as highly skilled technicians in recognized occupations requiring the direct application of specialized functional aspects of science, mathematics, and advanced technical skills and information.

6.46-3 Supplementary courses are designed for employed persons, including journeymen, to obtain additional training in the direct application of specialized functional aspects of science, mathematics, and advanced technical skills and information required to meet the demands of recognized occupations.

emerging from new and changing technologies.

6.46-4 Selection of students shall be based on appropriate criteria which may include work experience, previous education and job training, test results, and counseling in order to assure a reasonable probability that students:

6.46-41 Be 16 years of age or over and will profit from the instruction offered.

6.46-42 Have a potential for becoming employable as highly skilled technicians in a technical occupation necessary for the national defense immediately upon completion of the course.

6.47 Initial Program offerings shall include:

Automotive technology

Drafting technology

Electrical technology

Industrial technology

Instrumentation technology

Metals technology

Health technologies

Secretarial Science

Mid-management

6.5 These curricula which lead to an Associate Degree shall be considered as technical in nature.

7.0 Plan for Administration

7.1 Administration Organization

The Vocational-Technical Training Center shall be operated as a division of Jackson County Community College.

Recommended personnel would include:

- Director (or equivalent) complete responsibility for development, implementation, and periodic evaluation.
- Coordinators
- Counselors
- Full-time instructors
- Part-time instructors
- Clerical
- Custodial

7.11 Qualifications: All staff members, regardless of position, shall meet the requirements as set forth by the State Plan for Vocational Education, State of Michigan.

7.2 Guidance: Services shall include:

7.21 Student selection
7.22 Student placement and follow-up
7.23 Follow-up of graduates

Counselor staff shall maintain laison with guidance counselors in area high school, provide personal, educational and vocational counsel to students and adults, and selection of applicants, and establish a continuous program of student and graduate placement and follow-up.

7.3 Research and Evaluation

To insure the Master Plan is valid and consistent with the ever changing community in which it exists, it is essential that the following action be undertaken:

7.31 Survey existing and projected school, community, and employment conditions that have bearing on curriculum plans.

7.32 Make recommendations concerning additional and possible adjustments to the Master Plan for a comprehensive area program.

7.4 Advisory Committees

7.41 School Advisory Committee

An advisory committee composed of the Superintendent from each high school district or delegated representative; concerned with evaluation and recommendations relating to procedures, and policy.

7.42 General Advisory Committee

An advisory committee to advise school officials in the development of the overall vocational-technical program.

7.43 Occupational Advisory Committee

An advisory committee concerned with appropriate instruction in a specific area, (industrial, business, joint apprenticeship committees, practical nursing, etc.)

7.44 Special Advisory Committees

An advisory committee established to advise on a particular problem. Upon completion of responsibility, committee shall be dismissed, or established as a permanent committee.

7.45 Joint Apprenticeship Committee

An advisory committee to advise in the development of instructional programs of preparatory, extension and apprentice training in specific crafts and/or occupations.

8.0 Initial Physical Facilities

All areas shall be designed to accommodate up to 30 students. Each laboratory shall have included, in, or adjacent to, a lecture demonstration area.

All facilities, laboratory and classrooms shall be designed for both day and evening use.

8.1 Distributive and Business Education

- Classrooms
- Typing Rooms
- Office Machine Laboratory
- Shorthand Classrooms
- Data Processing Laboratory
- Office/Clerical/Graphics Room
- Accounting Room
- Advertising and Display Laboratory
- Service Laboratory

8.2 Trade and Technical Education

- Classrooms
- Automotive Shop
- Small Engine Shop
- Auto Systems Laboratory
- Appliance and Service Shop
- Electrical Shop
- Electronics Shop
- Machine Shops
- Drafting Rooms
- Welding and Fabrication Shop
- Metallurgy and Materials Laboratory
- Fluid Power and Instrumentation Laboratory
- Building Trades (Apprenticeship)
- Nursing Arts Instructional Unit

8.3 Office Space

8.4 Utility Space

8.5 Industrial Relationships and Space Requirements.

8.51 Trade and Technical Education

8.511 Internal Power Family

- Small Engines	1800 sq. ft.	
Storage	600	
- Auto Service Shop	6000 sq. ft.	
Storage	600	
- Auto Systems Laboratory	1200 sq. ft.	
Storage	600	
- Agriculture Mechanics Shop	3000 sq. ft.	
Storage	600	
- Fluid Power & Instrumentation	1200 sq. ft.	
Storage	600	
Sub Total		16,200

8.512 Electrical and Electronics Family

- Appliance Repair	1800 sq. ft.	
Storage	600	
- Electric Shop	1800 sq. ft.	
Storage	600	
- Electronics Laboratory	1800 sq. ft.	
Storage	600	
Sub Total		7,200

8.513 Industrial Family

- Machine Shop	2400 sq. ft.	
Storage	600	
- Welding/Fabrication Shop Laboratory	2400 sp. ft.	
Storage	600	
- Materials/Metallurgy Laboratory	1200 sq. ft.	
Heat Treat Storage	600	
- Machine Shop (Processing)	1800 sq. ft.	
Storage	600	
Sub Total		10,200

8.514 Other Areas in Trade & Technical Education

- Apprenticeship Laboratory	2400 sq. ft.	
- Classrooms 5 @ 600 (two together with doors)	3000	
- Drafting Room	1400 sq. ft.	
Storage	400	
- Drafting Room 3 @ 1200	3600 sq. ft.	
Storage	300	
Sub Total		11,100

8.515 Supporting Space Requirements

Assistant Director - High School Division	150 sq. ft.	
Division Chairman - Trade & Technical	150 sq. ft.	
Faculty Offices, 20 full time people (10 offices @ 150) shared	1500 sq. ft.	
Faculty Offices, 10 part time people (one area, 4 @ 150)	600 sq. ft.	
Conference Room (12 people)	200 sq. ft.	
Clerical & Receptionist	300 sq. ft.	
Work Room	150 sq. ft.	
Apprentice Faculty (12)	750 sq. ft.	
Coordinator's Office (Apprenticeship)	150 sq. ft.	
Sub Total		3,950
TOTAL, Trade & Technical (net)		48,650

8.52 Practical Nurse Education

Clinical Laboratory	1200 sq. ft.	
Storage	400	
Multi-purpose Classroom	200 sq. ft.	
Nurse Station	100 sq. ft.	

8.521 Supporting Space Requirements

Director's Office	150 sq. ft.	
Clerk & Receptionist	150 sq. ft.	
Work Room	150 sq. ft.	
Faculty (4) (2 offices @ 150)	300 sq. ft.	
Conference Room	200 sq. ft.	
Sub Total		3,850

8.53 Distributive & Business Education

Typing Room 2 @ 1000	2 000 sq. ft.	
Shorthand 2 @ 1000	2 000 sq. ft.	
Classrooms 4 @ 600	2 400 sq. ft.	
Data Processing classrooms 2 @ 600	1 200 sq. ft.	
Data Processing classroom (1)	1 000 sq. ft.	
Office Machines Room	1 200 sq. ft.	
Office/Clerical Graphics Room	1 200 sq. ft.	
Accounting Room	900 sq. ft.	
Distributive Laboratory	1 200 sq. ft.	
Storage	400 sq. ft.	
Service Laboratory	1 200 sq. ft.	

8.531 Supporting Space Requirements

Department Head Office	150 sq. ft.	
Clerk & Receptionist	150 sq. ft.	
Conference	200 sq. ft.	
Work Area	150 sq. ft.	
Faculty (10) 5 @ 150	750 sq. ft.	
Part Time Faculty (6) 4 @ 150	600 sq. ft.	
Sub Total		16 700

8.54 Administrative Center

Director's Office	150 sq. ft.	
Counselors 2@ 120	240 sq. ft.	
Work Room, storage & vault	300 sq. ft.	
Clerks (two)	200 sq. ft.	
Conference Room	200 sq. ft.	
Work Office	150 sq. ft.	
Secretary	100 sq. ft.	
Waiting	200 sq. ft.	
Sub Total		1 540

8.55 Student Services

Commons (lounge) (library, study)	2 000 sq. ft.	
Vending Machine Area	200 sq. ft.	
General Storage Area	1 000 sq. ft.	
Sub Total		3 200
TOTAL, Administrative & Student	(Net)	4 740

TOTALS, Technical & Trade	48 650	
Admin. - Student Services	4 740	
	53 390	SF Net

9.0 Funding

Allocation of funds under this program shall be used only for the purpose of occupational preparation programs and shall not be used to replace expenditures currently being used by local districts for general or occupational training whether or not they are currently being reimbursed. The intent of the new funds are not to supplant local funds presently being used for occupational training and education.

9.1 High School students, or the equivalent, shall not be charged tuition as determined by the administrative unit of the area center.

9.2 Post high school enrollees in occupational curricula shall be charged tuition as established by the administrative unit of the area center.

9.3 Expenses of capital equipment, program of instruction and program operation, shall be covered by local taxation to the extent it is not reimbursed by federal and/or state [illegible]s, tuition, gifts, or grants.

VT 001 897
Stephenson, Don Ray
S.A.V.E.S.-Selection Approaches for Vocational Education Students.

Contra Costa Coll., San Pablo, Calif. Office of Research and Planning
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 1Nov66 6p.

*ADMISSION CRITERIA; *TECHNICAL EDUCATION; *STUDENT TESTING; VOCATIONAL EDUCATION; *JUNIOR COLLEGES SAVES; *SELECTION APPROACHES FOR VOCATIONAL EDUCATION STUDENTS

This progress report identifies some of the problems faced in finding methods that will assist in the placement of students in the trade-technical area. Several approaches that may be used in selection procedures are briefly described. Search has revealed only two highly tenable approaches: (1) the selection and validation of batteries of tests for each curriculum, and (2) validation through factor analysis of the General Aptitude Test Battery against the criterion of success in related classes. (PS)

VT001 897

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CONTRA COSTA COLLEGE SAN PABLO, CALIFORNIA

OFFICE OF RESEARCH AND PLANNING

Guidance for Occupational Students

Contra Costa College is presently engaged in an N.D.E.A. Title V project to help occupational students select courses to study appropriate to their aptitudes and interests. We have selected the word S.A.V.E.S. as being expressive of the intent of the project, i.e. Selection Approaches for Vocational Education Students.

S.A.V.E.S. is seeking information from: (1) procedures used at other junior colleges; (2) commercial test companies; (3) military tests; (4) technical education centers; (5) Education Retrieval Information Centers - ERIC: (6) The department of Employment; and (7) any other sources which might provide usable information.

Thus far the search has revealed only two highly tenable approaches: (1) the selection and validation of batteries of tests for each curricular offering - much like the approach used at Los Angeles Trade Technical College; and (2) validation through factor analysis, of the General Aptitude Test Battery against the criterion of success in related classes. The use of the G.A.T.B. seems particularly appropriate because of its long history, the amount of extensive research done on it, and its wide applicability to many curricular offerings.

Any additional ideas, information or reactions you might have would be appreciated. If you would like more information on S.A.V.E.S. write to: Don Ray Stephenson, S.A.V.E.S., Contra Costa College, San Pablo, California 94806.

VT 001897

November 1, 1966

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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S.A.V.E.S. - Selection Approaches for
Vocational Education Students

TO:

FROM: Don Ray Stephenson, S.A.V.E.S. Project Director

PROGRESS REPORT

This report is an attempt to make you aware of what I am doing and some of the problems that must be faced in finding methods that will assist in the placement of students in the trade-technical areas.

MAJOR PROBLEMS

1. Little has been done by any of the major testing companies. Correspondence with these companies reveals that most of them now are awakening to the need for such tests and are starting to develop them. About five years from now there will be quite a few such tests available.

   The junior colleges seem to be aware of the problem - but only one (Los Angeles Trade Technical College) has done anything about selection of trade-technical students. The apparent reason for such apathy seems to lie in the fact that few of the trade-technical classes are full - so a warm body will do until such time as we must choose between students. When the colleges have to decide who can and who can not enter a class then there will be genuine action on finding selection techniques.

2. Should we consider a single test battery to be used for all students if at all possible? Though a series of tests for each specific occupational area portends to be the most fruitful, can this approach be adopted because of cost?

3. What student characteristics should be taken into consideration by the selection devices? Should anything other than aptitude be evaluated? What is the role of interest and personality factors in helping a student decide upon a course of study?

4. What criterion should be used in validating a test or tests? Should performance on the job be the final criteria? What weight should be given to instructor grades as the criteria for comparison? If the test is administered to students and the results of the tests are compared to instructor grades it becomes possible for the biases of the instructor to determine who will be selected to come into the class. An adequate test would help the instructor to examine the needs of the students and the job market and the relationship of his class to them.

5. How should the study be designed? Once an instrument or instruments are selected how should the tests be validated? How long will it take to be able to use the results with any precision? It appears that the actual design of the study will be largely determined by the instruments and the criterion for evaluation. Once these are decided upon the actual design will be relatively simple to determine. The Research Coordinating Unit of the State Department of Education has offered to assist in setting up the design.

6. The development of a new form of the Kuder Occupational Interest Survey (Form DD, 1966) offers a real potential in helping to assess student interest. Also a new form of the Strong Vocational Interest Inventory has just been published. From all indications both of these tests can offer a great deal of help to the student in deciding what he wants to do.

SELECTION OF AN APPROACH

There are several approaches that may be used in setting up selection procedures:

a. A simple test of knowledge of the field or fields - along with a general intelligence test. This approach is advocated by Dr. Carter, testing specialist at Berkeley.

b. Dr. Stewart, at Berkeley, recommends the use of an interest test he has developed and validated on trade-technical students. He feels that this test gives adequately different student profiles and should be used along with a weighted multiple aptitude test battery.

c. Factor analysis could prove to be the key to most of the solutions available. Tests such as the Flanagan Aptitude Test with nineteen distinctive factors identified, offer some real possibilities. However, some parts of the Flanagan are old, or dated, it is weighted toward the professions, and does not have factors identified for many of our programs at Contra Costa College. It also takes three one-half days to administer the entire battery.

d. There are other tests such as the Dailey Vocational Tests, the Minnesota Vocational Interest Inventory, and the Multiple Aptitude Tests which I am in the process of investigating in depth.

e. The most famous, and I might add, outstanding, work done in the selection of trade-technical students has been conducted by Dr. Margaret Crawford at Los Angeles Trade Technical College. Here the student selects a field before entering the school. Then the student is given a battery of tests from which he is counseled. The results of the battery of tests (which are different for each course of study) determine if he or she is qualified to enter the school.

   One very positive aspect of this approach that should be noted is the fact that the teachers seem quite satisfied with their students. This is not too surprising, however, since they may interview all students before admitting the student to class and also nearly one-half of the students who attempt to attend Los Angeles Trade-Technical College are referred to adult education for skills improvement courses.

   A trip to the Los Angeles Trade Technical College reveals some fundamental problems in the way the testing is done. Perhaps one of the biggest difficulties with the tests administered there lies in the fact that a different battery of tests are given for each specific area. The costs of running a program of this nature would seem prohibitive. Another problem with their present batteries is that several of the tests were put into the battery for the course as the course was added to the curriculum. Consequently several tests measuring the same thing, i.e. arithmetic reasoning, are used in different batteries for the different courses. It would seem appropriate to use just one test for arithmetic reasoning in six different batteries rather than to use six different arithmetic reasoning tests. They are in the process of starting to revise the batteries and bringing them up-to-date.

A POSSIBLE ANSWER

Perhaps the most fruitful possibility that I have explored so far is the use of the General Aptitude Test Battery, (G.A.T.B.). This test was developed and is used extensively in the Department of Labor and the various state departments of employment. It has been thoroughly validated and is constantly being worked with. If we were to use the G.A.T.B. to determine aptitude it would be necessary to validate the test with our own students. The present validation has been with students in technical institutes or with workers already employed in the field. This is perhaps the best approach to our problem since once we establish what level of the various aptitudes are necessary for success in the classroom it will be a relatively simple task to administer the tests to new students and be able to predict his chances of success in a specific course.

Would you please give me your reactions to such an approach? It appears that there are some difficulties but most of them can be surmounted. Any ideas you have would be appreciated.

If you have any critiques or know of any information that you think might be useful, please let me know - you will find me open to suggestion. My office is located in the West Wing of the Administration building and my phone extension is 308.

VT 002 294
Neighborhood Youth Corps First National Conference Report, 1966.

Neighborhood Youth Corps, Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 66 84p.

*YOUTH PROGRAMS; YOUTH EMPLOYMENT; *CONFERENCE REPORTS; PROGRAM IMPROVEMENT; YOUTH AGENCIES; *DISADVANTAGED YOUTH; WORK EXPERIENCE PROGRAMS; PROGRAM ADMINISTRATION; PROGRAM COORDINATION; PROGRAM PLANNING; EMPLOYMENT PROGRAMS; SPEECHES; *ADULT VOCATIONAL EDUCATION; *FEDERAL PROGRAMS; POLITICAL INFLUENCES; ORGANIZATIONAL CHANGE; PERSONNEL SELECTION; EMPLOYMENT QUALIFICATIONS; SOCIOECONOMIC INFLUENCES
NYC; NEIGHBORHOOD YOUTH CORPS; *NEIGHBORHOOD YOUTH CORPS FIRST NATIONAL CONFERENCE, ST. LOUIS, MISSOURI, MAY 2-4, 1966

After more than a year of Neighborhood Youth Corps (NYC) operations, a conference was convened May 2-4, 1966, in St. Louis, Missouri, and attended by over 1,000 NYC sponsors and administrators, enrollees, leading youth experts, industrialists, labor leaders, and others. The participants' central task was to plot a course for change in the NYC, the educational system, hiring policies and practices, and other areas that can have a positive effect on the employment of youth. The Conference was keynoted by W. Willard Wirtz who outlined the role of the NYC in the overall war against poverty. Principal addresses delivered were; (1) "The Credentials Trap" by S. M. Miller, (2) "The World of the Youth We Serve" by Kenneth E. Marshall, (3) "Neighborhood Youth Corps; Goals and Policies in the Year Ahead" by Mark Battle, (4) "The Ideal and the Possible" by Robert Schrank, (5) "How the NYC Can Help Change Your Schools" by Daniel Schreiber, and (6) "How NYC Can Help Change Hiring Policies and Jobs" by William Landis. Excerpts are also included from; (1) a speech, "The Changes We Need," by Sally Aylsworth, an NYC enrollee, (2) "Some Reactions," a panel discussion moderated by Raphel O. Lewis, (3) a panel discussion, "The Dilemmas and Politics of Coordination," moderated by Martin Rein, (4) "Prescription for Change," a panel discussion moderated by Eli E. Cohen, and (5) a conference summary delivered by Simon Slavin. (ET)

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NEIGHBORHOOD YOUTH CORPS FIRST NATIONAL CONFERENCE REPORT • 1966

VT002294

U.S. DEPARTMENT OF LABOR • W. Willard Wirtz, Secretary

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FOREWORD

The first National Conference of the Neighborhood Youth Corps, held May 2-4, 1966, in St. Louis, Missouri, was a working conference. But it was also the first evidence of the Neighborhood Youth Corps as a viable, dynamic institution that is more than the collection of separate sponsors, Federal officials, youth and paper that made up the NYC up to this point.

It was given a difficult task: to plot a course for change—change in the Neighborhood Youth Corps, change in the educational system, change in the hiring policies and practices—change that could end the frustrating paradox of heavy youth unemployment in a high employment economy.

Like most conferences, this one was rich in milling people, speeches, and conversations in hallways. But there were significant aspects that were unique.

There were milling people, all right—over 1,000 of them—but they represented the broadest possible cultural cross-section of the United States. There were high school dropouts from New Jersey and proud Navaho Indians from New Mexico; Hawaiians of Chinese origin and priests from San Antonio; an impressive assortment of regional speech patterns, varying skin tones and ethnic backgrounds.

Sponsors of NYC projects, enrollees, leading youth experts, industrialists and labor leaders brought to their task a staggering assortment of experience, expertise and points of view. But they also brought a mutual dedication and an ever-apparent enthusiasm. They were eager to compare notes with their colleagues; they were pragmatic; they were oriented toward results rather than research.

The conference was informal, with people in shirtsleeves rather than in jackets a good deal of the time, and the conversation and speeches tended to refer to kids, rather than the formal enrollee, or student, or adolescent.

The conference, in fact, reflected the hundreds of local NYC projects after more than a year of NYC operations: informal, but tending toward better organization; practical, but leaning toward the abstraction of meaningful findings; flexible in order to meet the real needs of a clientele of late adolescents who are not always easy to accommodate, but who are in fact tomorrow's citizens. As President Johnson has said, "If we fail them it will mean that we are failing our future."

Jack Howard
Administrator, Neighborhood Youth Corps

Keynote Address by

Secretary of Labor W. Willard Wirtz

Two years ago, in a Message to Congress, the President called upon the Nation to face up to the accusing fact of the poverty of one-fifth of its members. The Economic Opportunity Act was signed on August 20, 1964, the appropriation legislation two months later.

It would be satisfying, as we meet here tonight in the carrying on of this program, to be able to measure in some meaningful way the accomplishments of the past eighteen months. A good deal of the current commentary is critical. This was inevitable, and it is good. The decision to do what had dangerously long been left undone meant the inevitable kindling of smouldering hopes into flaming expectations and the turning of patience into impatience, so that a single day's delay would thereafter be more censured than all the preceding years of contributary neglect.

All of these things can be fairly said of the record of the last 18 months' engagement in the war on poverty:

First. The American people have in the past year and a half done more for each other, more to make the Golden Rule a national as well as a personal ethic, than have any people in any country in any comparable period in history.

Second. Everything done so far should have been done before.

Third. So much is still to be done, and *has* to be done, that the only relevant measure is not our achievements but our capacity—which is unlimited and not yet even tested.

A vast human welfare enterprise has been undertaken in less time than most private corporations take to open a new plant or market a new product. In my judgment, Sargent Shriver and his associates in the Office of Economic Opportunity have, in these eighteen months, combined courage, dedication and hard-headed realism into an incomparable record of accomplishment.

The Federal Government's over-all "poverty budget" has been increased at a rate of almost two billion dollars a year. A pace of helping an *additional* million people every year has been set.

But if the question is whether much has been learned in these 18 months (sometimes by making mistakes), or if the question is whether *more* has to be done, or if the question is whether more money has to be invested in this enterprise in the future—to all of these questions, the answer is, *yes*.

This record supports commendation or criticism, pride or prejudice. We recognize always that "self-criticism is democracy's secret weapon," but isn't it better to get on with the job?

That is why we are here.

The purpose of the Neighborhood Youth Corps is to try to assure every American boy and girl a fair chance during the critical years between 16 and 21.

This is the time when the future either opens up or closes up. It is the time when the individual takes over the direction of his own life—or ought to. It is the time he, or she, has the freedom to choose—or ought to. It ought to be the time of option. But there are too many today for whom this isn't true.

They are why we are here.

Let's look at the size of the job—even if only in two-dimensional numbers:

There are about 18 million 16 through 21-year-old Americans. Most of them are doing pretty well. They are—literally—the luckiest kids in the world. But some of them are in serious trouble, and some more of them are right on the borderline between having—and not having—a future to look forward to.

Hard-headed analysis tells us that about one out of every ten of these 18 million young Americans is in a situation where some kind *of special work opportunity—now—is important,* and critically important.

Take this fact home with you: In your community, if it is typical, there is a need for supplemental work opportunity programs for one out of every ten boys and girls 16 through 21 years old. These 1,800,000 young Americans are the target group for the Neighborhood Youth Corps, the Job Corps, and other similar programs.

This is the biggest growth investment opportunity in this country today.

We have the picture still clearer in our sights in terms of the Neighborhood Youth Corps in-school and out-of-school programs. There are about 10 million boys and girls in the 16 through 18-year-old group. Every one of them ought to be in school. About 7½ million of them are—mostly in high school, some in college.

Of those in high school today, one in about every six—for a national total of about 1.1 million—faces a serious economic problem. It is serious enough that it may mean the difference between staying in school or dropping out. It may be the difference between motivation and frustration, or between decency and delinquency.

There is another much smaller group of boys and girls (our estimate is 100,000 in the country as a whole) who have dropped out of school, but who will return if part-time work can be arranged for them.

This, then, is the target area for the Neighborhood Youth Corps in-school programs: the one in six—about 1.2 million in the country as a whole—who need part-time work opportunity to stay in school or to return to school.

The Neighborhood Youth Corps out-of-school program area is harder to define. But we know that there are at least 500,000 boys and girls, 16 through 21 years old, who are out of school and not at work, and who need work. Most of them are "hard cases," who didn't finish high school, come from poor—typically broken—families, aren't very good private employment investments yet, and probably have to be met more than half way.

So this is the size, as things stand now, of the challenge.

We—you and me—have made a fair start at meeting it.

- Over half a million boys and girls are today Neighborhood Youth Corps members or alumni. They have performed over 100 million man-hours of useful work in the past 16 months and have received over $125 million in earnings.
- Almost 1,000 local projects are in operation today—in every State and in Puerto Rico and the Virgin Islands.
- Today's *current* Neighborhood Youth Corps enrollment is near 200,000. But this has to be compared with the "problem area" of 1.7 million.

We are getting results, but they are hard to measure. The general economic situation has improved materially during recent years, and there is no way of measuring how much that—and how much the "poverty programs"—have contributed to various gains. But there are indications that are relevant as we try to measure the effectiveness of the Neighborhood Youth Corps program.

- The youth unemployment rate has been cut substantially since the Neighborhood Youth Corps program was started. (It was 13.9% in January 1965 and is now 10.7%—down by a quarter, but still tragically high.)
- In city after city the high school dropout rate among boys and girls in the Neighborhood Youth Corps is cut to a fraction of what it is among the student body as a whole: to less than half in Detroit and in six school districts in Texas and Oklahoma; to a fifth in Kansas City, Missouri; to one-seventieth in Chester County, South Carolina.
- Sixty-two percent of the boys and girls in the Wichita, Kansas, Neighborhood Youth Corps project raised their grades; and their absenteeism rate dropped 50 percent.
- While juvenile crime and delinquency rates for the country as a whole have been rising, in one city after another where Neighborhood Youth Corps programs have been developed, those rates have dropped. The effect has been so immediate and sharp that local law enforcement officials have credited these programs with the change. This was true in East St. Louis, where the juvenile crime rate dropped 18% after the Neighborhood Youth Corps program got started; in Kinloch, Mo. where the Mayor reported an 80% reduction in juvenile crime and vandalism; in Covington, Kentucky—down 14%; Newark, New Jersey —down 10%; Oakland, California—down 19%; Cincinnati—down 42%. In Detroit, during a period when the juvenile crime rate was rising by 12.6% in most of the city, it decreased as much as 20% in the precincts where there were Neighborhood Youth Corps projects in operation.

We are not satisfied. We are encouraged.

Now, of the future.

There is an immediate demand to be met.

This summer, 1,800,000 young Americans—age 16 through 21—will look for work and not be able to find it—unless special steps are taken. Some will be seeking temporary work—with their return to school in the Fall hanging in the balance. Others will be trying to find their place in life, to become independent, self-sufficient.

President Johnson said when he announced the Summer 1966 Youth Opportunity Campaign: "If we fail them, it will mean that we are failing our future."

The goal of the Summer Youth Opportunity Campaign is to increase by at least one million the work and training opportunities for young Americans.

Private employers, who were largely responsible for the success of the 1965 campaign, are again being asked to participate. The 620,000 firms in the country that employ from 10 to 100 workers are asked to take on at least one extra summer trainee.

The 60,000 larger plants are asked to add one extra summer trainee for each 100 employees.

Other organizations such as labor unions, trade associations, churches, and colleges are asked to make a similar effort.

State and local governments will participate.

The Federal Government will do its share. Each government department has been directed to find meaningful work for one trainee for every 100 employees on the payroll. These job opportunities will be given to the young people who need them most because of economic or educational disadvantages.

The size of the Neighborhood Youth Corps program for the next fiscal year, through June 1967, has not yet been determined—except that it will be substantially increased. This decision is being made now, by the Congress. But regardless of the size of the Neighborhood Youth Corps appropriation for the coming year, there will be some key administrative decisions to be made.

We will probably receive, next year, two proposals—perhaps three—for every one that can be approved. We will have to pick and choose. It is a primary purpose of this meeting to discuss with you—who will be making these proposals—some of the things we have in mind regarding this selection process. We want your advice and we expect to rely on it.

There are three points of emphasis in our own current thinking. They all relate to the desirability of concentrating on the *quality* of these programs. Poverty is too human a matter to be left to the computers. The poor *aren't* statistics. There *isn't* an *average,* or even a typical, "poor" person. This isn't a numbers game.

One. *The hard cases have got to come first.*

The tendency in any large-scale program—especially a government program—is to give the easy cases priority. They cost less. They make it easier to run up an impressive box score, and to make this year's record look better than last.

We have the courage of our convictions and the self-confidence to avoid the slavery of statistics.

The Neighborhood Youth Corps record so far shows a reasonably good concentration of efforts on the hard cases.

- 68% of all enrollees come from families with incomes of less than $3,000 a year; but this percentage should be—and will be—significantly higher than that.
- 35% of all enrollees are non-white.
- 26% of the out-of-school enrollees have no high school education.

Stern priority will be given in the next stage of the Neighborhood Youth Corps program to those projects which hit the hard cases hardest, to those which reach the poorest poor.

To encourage the development of such programs, I am directing that $4 million from the Manpower Development and Training Act appropriation be allocated to a Handicapped Youth Experimental Training Fund. This will be used for training programs that can be carried on this summer, as part of the President's Summer 1966 Youth Opportunity Campaign. It should mean work-training opportunities for from 5,000 to 10,000 seriously disadvantaged young Americans.

We will follow, so far as the Manpower Development and Training Act provisions permit, the general pattern of the Neighborhood Youth Corps program in administering this Handicapped Youth Corps program

Training Fund. This will mean that preference will be given to projects proposed by experienced Neighborhood Youth Corps sponsors. These proposals will have to made quickly, preferably within the next four weeks. They should be submitted to Curtis Aller, Director of the Office of Manpower Planning, Evaluation and Research.

By "handicapped youth" I mean those whom life, as well as birth, may have put at a special disadvantage.

- This includes those whose poverty is compounded by crippled minds or bodies.
- It includes those who, coming out of penal institutions, with two strikes against them, are desperate now for that work experience necessary for the all-important first reference.
- It includes the military rejects.
- It includes those so illiterate that they can't decipher the most rudimentary application forms.
- Yes, it also includes those who are in rebellion against work and have to be pulled in off a ledge of utter despair.

In the next stage of the Neighborhood Youth Corps program, the least shall be first.

Two. *Neighborhood Youth Corps programs should not only support but must also strengthen those who take part in them.*

Necessary supportive services should be included in NYC programs, particularly in the out-of-school programs.

It is a fraud on young men or women to give them six months' work if at the end of that time they are still unable to get a job because they cannot read or fill out a job application. It is dangerous to raise the hopes and aspirations of the most seriously disadvantaged young people and then let them go away no closer to self-sufficiency than when they came—and it mocks the high purpose of the Economic Opportunity Act.

We must make sure that each individual will get the maximum possible benefit from his Neighborhood Youth Corps experience.

This means an array of supportive services: remedial education; health services; intensive counseling; sensitive and competent supervision.

This takes money. Even more, it takes imagination, energy, and the combined efforts of a whole community. More and more, the Community Action Agencies are providing this leadership. There are other resources that have not yet been tapped for improving the Neighborhood Youth Corps program. The Elementary and Secondary Education Act makes it possible to expand and improve the educational programs for the disadvantaged in a way not thought possible a year ago. You, as sponsors, should look for ways to harness the billion-dollar resources of this program to the needs of your young Neighborhood Youth Corps enrollees.

Three. *Part of the Neighborhood Youth Corps responsibility is to see that it leads to something else.*

There is no good—more probably there is harm—in bringing boys and girls out of the cold into a warm room of promise for a few minutes of their lives if the only exit from that room is a trap-door back down to nothing.

It is the remembered part of the parable of the Good Samaritan that he crossed over to the other side of the street, bound up the wounds of the traveler from Jerusalem, set him on his own beast, and brought him to an inn. Yet the sterner teaching, often lost in the retelling, is in the arrangements the Samaritan made with the innkeeper the next morning: "Take care of him; and whatsoever thou spendest more, when I come again I will repay thee."

The only answer to poverty is jobs; and a Neighborhood Youth Corps program is *not* an answer except as it leads to jobs.

We are developing a program for following up each individual enrollee after he leaves a Neighborhood Youth Corps project to try to assure that he, or she, either finds employment or receives the range of services that may be needed. Project sponsors will be asked to notify the local Youth Opportunity Center or Employment Service office as each boy or girl leaves a Neighborhood Youth Corps project. We will pick up their records at that point, and stay with them in one way or another as long as is necessary or worthwhile.

Statutory changes are being considered to permit better integration of the Neighborhood Youth Corps and Job Corps programs with the Manpower Development and Training Act Program, and to facilitate movement from one to the other when this is necessary to complete an individual's training course.

With the economy operating at its present pace, so that there is need for both skilled and unskilled workers in most communities, it ought to be possible to arrange for at least a trial work opportunity in private employment for every young man or woman who has made good use of the Neighborhood Youth Corps experience. I am thinking particularly of the out-of-school programs.

Getting these youth across this last bridge and with jobs will frequently involve overcoming both employer and employee reluctance which is special to this situation and which ought to be recognized squarely for what it is. There are two parts to this and to the question asked repeatedly today—of how there can be unemployment when the columns of Help Wanted Ads are running longer and longer. To the extent that the advertised jobs are unskilled jobs, the truth is that one result of the national declaration of war on poverty is that many of the previous casualties of that war are now unwilling to do work which has become a symbol of poverty by being always consigned to the poor—particularly to the non-white poor. To the extent that the open jobs involve even elementary skills, the problem—somewhat different—is that employers got accustomed, during six years of 6% unemployment (from 1958 through 1963), to hiring only employees already fully qualified *by experience* for the work.

These problems can be met, but it will take specific attention to meet them. The most important single element in today's strategy in the war on poverty is to match the increased need of the economy for workers with the need of the poor for jobs. The economic theory that this will happen *automatically* is probably about 50% right.

The biggest gains against poverty can be made by taking affirmative steps to use the other 50% of this job potential—through, for example, the development of on-the-job-training programs, in which the extra training cost is financed under the Manpower Development and Training Act.

The economy *is* the best philanthropist, and instead of false argument about financing the war in Viet Nam out of the war on poverty, there must be realistic recognition of the full potential of the present economic situation in rooting out the causes of poverty.

We will, then, count arrangements for getting Neighborhood Youth Corps enrollees across the bridge into jobs as an essential part of all future proposals.

The ultimate success of the Neighborhood Youth Corps will not be measured in terms of numbers of enrollees, but only by the number of them who leave standing up and who stay standing up. We are not in the crutch business, or interested in handing out passports to nowhere.

Finally, it must stay in our minds that the Neighborhood Youth Corps and other programs like it *are* in fact crutches—for the community itself. These programs are only necessary because something in the educational system or the economic system or the relationship between the two is wrong, and they are justifiable for only so long as it takes to remedy these defects. If there is ever a single second generation Neighborhood Youth Corps boy or girl, we shall have failed in our purpose.

Excerpts from:

CONFERENCE SUMMARY

SIMON SLAVIN: We have had about twelve or fourteen hours of general presentation, about a hundred hours of group discussion, thirty groups meeting. The range of material that you have reviewed is extraordinarily wide. It does seem to me that there are several central things that have tended to come through the bulk of the discussions.

I think for one thing it is absolutely remarkable the extent of agreement between many of you and what the enrollees have suggested. I think that's a very important key, as to how you can engineer change within your own organization.

We started, I think, in extraordinarily sharp form. Secretary Wirtz's speech gave the broad dimensions of the problem. One didn't have to do a great deal more defining. Mr. Shrank perspectively indicated that we were dealing with a problem in social and not individual failure. The way in which a problem is defined is always the key to the way in which prescriptions for change are to be developed.

I think we operate in the context of a paradox that is absolutely unique in American experience. This continued unemployment and under-employment—thirty million people in poverty—exists at a time when economists recall to us that we have full employment and the most unparalleled prosperity mankind has ever known anywhere in this world. That is an extraordinary paradox, and one for which there is no good economic theory; there is no good social theory, and unfortunately, there is no good political theory either.

It became clear to me quite early in these proceedings that you were dealing with change in at least two major dimensions. You were dealing on the one hand with problems of *internal change:* how you might change; how you might change one another, how you might change the work of your own agency, and your own programs. It was very easy for you to direct the change to another level of program. All of you know how National should change. I'm not sure that National knows how all of you should change, but I am sure they think they do. Primarily, each one of us has got to know how each one of us has got to change in our own way of thinking.

The major question that you have had to look at and

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the question you ought to take back with you is this: What would I do differently if I were free to do it? I think that's the real question of internal change for you. Several speakers addressed themselves to this, notably Deputy Administrator Mark Battle in, I think, a very concise and quite brilliant presentation as to how internal goals have to be modified. Mr. Schrank similarly presented an ideal picture which pre-disposed patterns of change, changes each of you have to think about. I think the Secretary himself gave his leads on that score.

The second dimension of change, and one about which there has been much less consensus and much more potential controversy, is the question of *external change*. Many of the speakers and panelists turned their attention to this question, and I am not sure everybody is at all clear about what they mean when they talk about institutional change. Everybody can agree on the need for institutional change, but it is very difficult to get two people to suggest what they mean by institutional change. It is like people who love humanity, but can't stand their next door neighbor. I think you must ask yourselves what changes can I help engineer or bring about in the organizational and institutional environment in which I work? This question has to be directed towards the ways in which you want to bring about change and programs related to your work directly.

I think there were four major injunctions that were made to you at the conference. They were essentially addressed to your intellectual perspective. I think they were implicitly suggesting to you that if you think differently, or to put it in a catchy phrase, if you "think change," the chances that you will "do change" are very much enhanced.

Let me first mention what I think these four directions of change were and then specify very briefly what is included in each one. I think first you were asked to *think wide*, to broaden the range of your vision, to get rid of organizational blinders. Secondly, I think you were asked to *think longitudinally*, or to think ahead, not only with perspective, but a perspective of what is to follow. Thirdly, I think you were asked to *think deep*, that is to probe down deep into the problem that you have to face. Then finally you were asked brilliantly this morning, I think, to *think new*.

Let me fill in the dimensions of these four aspects that I have just mentioned. Thinking wide asks you to develop peripheral vision, to look at other organizations and your own as part of a general system, and a general system that is incredibly complex. You not only are asked to broaden your peripheral vision, to look at related governmental programs, but you are also asked (and I think people were suggesting that unless you did this, your work would not have lasting effect) to look at the major institutions in your community, the big institutions, the labor institutions.

You were asked to look at the private welfare system. You have also been asked to look at the ways in which you could deal with the civic associations in your community. Beyond all this, you were asked to keep your eye on the consumer of your services, and not on the organizational demands of the particular program in which you work. You were asked constantly to put the question: what can we do best if we look at the problem presented to us by each individual enrollee? Nobody used the phrase, but obviously you were dealing with the problems of individualizing your work, of bringing that personal touch. I guess the enrollees at this conference got better than you did the idea of bringing that individual concern into a kind of flexibility that would make it possible for you to deal with the wide range of differences that confront you with respect to the enrollees in your program.

Concern was frequently expressed by some of your guests from community action programs who addressed you. It wasn't hard to get the hint that they think you are moving in on them. I think you are too, but moving in represents a challenge to you that I think you are going to have to face if there is going to be lasting effect of your work. The question I would put to you is this: Will NYC develop its own brand of community action to make the impact of your work lasting? Now, that doesn't answer the question as to whether you're really in this thing to put yourselves out of business. The Secretary thought that that was the case. I must say that I don't think it is the case. I think you are creating the foundations of a new institution. The question I think you've got to take back with you is this: in what way can you develop your own brand of community action? It won't be the same thing that the C.A.P.'s have now, but it will be something not too fundamentally different. Are

you ready to develop your own brand of community action? Are you ready to see to it that there is a lasting residue to the work that you do?

Now, an enormously interesting thing occurred to me as I went around and visited some of the discussion groups. I could only get to a mere handfull of them, but I did read the reports of all the discussion groups that were held yesterday. Several of your discussion groups suggested that you ought to find a way to develop maximum feasible participation of the trainees in your programs. They suggested such participation in the planning phases, in operations, in recruitment. Some of you suggested that you ought to use the power of the psychological mechanism in here. It seems to me that you do want to look at the ways in which your own programs can become vehicles for the employment of trainees, who then are able to work with other trainees in various phases of your program. I think this is an important dimension. It impressed me enormously as I looked through these reports of your discussion groups, and I don't know how to emphasize that too significantly.

Now, in broadening your perceptual field, I think you do have to look at problems of institutional change. I suspect that your local and regional and national staffs ought to begin to think about what the feasible routes are to institutional change. Dr. Schreiber suggested that the school system needs, in point of fact, to change. Well, the real question is, how do you measure change? Is it enough of change? Is the change in the right direction? Or are there too many bureaucratic obstructions that keep a system from moving more effectively? But something of that kind of change has to get into the industrial system, into the employment system, into the social agency system. All of these face the problems of discrimination. That is a fundamental institution in American life. It may be the single most important handle that you can use to bring about fundamental and meaningful institutional changes, particularly, in some areas, with respect to the problems of the trade unions and the ways in which your young people can get into apprenticeship programs and then move up the career ladder in certain fields.

Secondly, I say you have to think ahead. This implies that while you're more concerned with the present, with getting your budget in and getting your new proposals funded and seeing that the checks get in and so on, it is important for you at the same time to keep this lateral vision, to be thinking of what the next phase is. There were some interesting suggestions about how you might do this: planning for a year; thinking about what you would put into the thing a year ahead. Well, first you have to know what you want to do, if you have the resources to do it. Secondly, it means that you have got to look at your trainees, not so much from the point of view of how adequately you have dealt with them in your circumstances, but how adequately it is likely that they will be dealt with in subsequent circumstances.

With respect to these other programs, O.J.T. programs, industry and the like, it seems to me that while many of you in your discussion groups kept saying that's not our job—our job is to do the training—that the bulk of you were saying, we can never really accomplish that job. We've got to see to it that meaningful jobs come upon the training program. I think this is an enormously complex planning task, but inevitably one you have got to face. You are in phase two in a rocket-like kind of propulsion, and it is a more difficult phase, because you try to take more difficult cases. The future is going to be more difficult before it gets easier, but it seems to me that you have got to have that kind of time perspective as you go along. You have got to be concerned with career escalation, and if you can't do it in your own programs, you have got to help other programs of other agencies do it.

Mr. Glassman, the chap from industry, said at one point, "keep on pushing." I think he meant it. But I think you meant it when many of you kept saying we have to keep hammering at other institutions to see to it that they change in appropriate directions.

When you talked about thinking deep, my third category, I think you were talking about looking up and down the age cycle. You came to the same point. You've got to get below sixteen and you've got to go beyond twenty-one. First, you've got to create the climate of opinion that permits you to do this. Secondly (and the Secretary started this thing), you were talking about the fact that you needed to develop strength in dealing with double failures: with the least successful, with the greatest risk, with the failures among the unsuccessful, with the lowest of the low.

Until you can reach that, I think you will have failed in your job, because it will always be easy for you to parade charming and marvelous examples. The examples that you will have to parade are the tough, the ugly, the angry, the undisciplined. When you have been able to reach down to that I think you will have a more substantial success.

Over and over again, particularly in the discussion groups I visited, people kept saying: well, you've got to get into the rural problems and to the Indian Reservations where there are no jobs and there are no other agencies, and all the things you are talking about have no relevance to what we are doing. Nobody talked about the migratory farmers, but that's also an arena in which you have to begin thinking, as well as the intra-urban metropolitan areas—the great big cities that provide some of the most resistant problems for you.

Finally, with respect to the problem of thinking new, I thought your discussion on that was enormously interesting this morning. I think you are in the process of creating a new institution that can break the prevention barrier. I think you are in an act of creation that's not in many ways different from that of little more than a hundred years ago when the whole foundation for the public school system was laid. You know, that whole system isn't more than a hundred and twenty-five years old, not a very long time in the swing of history. You may very well be creating parallel institutions to the institution of compulsory universal public education. No greater challenge ever befell anybody than to be at the birth and the creation of what might ultimately be part of a way of life for us. It is in this sense that I think that the Secretary's hopes are in many ways over optimistic. If you succeed in point of fact, you may not have an NYC. But surely, if you do it right, you will leave a residue for a new type of credential system, one much more realistically established, one much more useful in function. Mr. Miller addressed more messages to you with respect to the credential system, but he was telling it to the wrong people. It's like the minister who keeps berating his flock because they don't come to church, and the people he is talking to are there. But there is something you can do about the thing. You can help create a climate around America. There are a thousand projects. Each of you are in touch with fifteen hundred, a thousand people in one way or another. That can be a very powerful force. I think as you get over the pre-occupation with the necessary daily administration such as getting the budgets in, getting the kids enrolled and so on, you will be thinking of new kinds of roles.

You will excuse the Professor of Community Organization for suggesting that I think you were talking about my field. I'd like to make a suggestion (it hasn't been asked of me here) that while you are talking about training for trainees, there's a new concept abroad: the training of trainers. More of this kind of thing has got to be done in more intimate groups where you can build a constituency that fights the battle that you alone can't fight; that brings the pressure on the Congress; that brings the pressure on your State Legislatures; that brings the pressure on institutions; that helps the Department of Welfare say it will not deduct what you pay that youngster from the family budget.

You can't do that yourself, it's the building of this constituency in alliance with important forces in the community that seems to me to hold a great deal of promise for the way in which what you do remains as a residue in your community.

Thirdly, the point has been made over and over again (it became somewhat a point of contention this afternoon) that there is an extraordinary opportunity to create new jobs. You can't beat industry over the head and hope that only through that will you be able to solve this problem. I think there were very realistic questions raised about this. The resistance there I think you will find continuous. You will have to hack away at it, because it isn't part of a system for non-economic units to be incorporated, unless we ever get to the point, ultimately of subsidizing labor in industry. We subsidize many things, public roads and so on, but we never subsidize labor. There might be as many as a million jobs that could realistically be created if the resources were made available. They are essentially jobs in the human relations endeavors, and the ways in which people provide service to people, rather than in industry. There are also jobs that are less subject to automation, so that the jobs that get created remain and don't disappear in the new wave of rationalization of production.

Finally, I think you were enjoined to be as creative as a creative spirit permits you. As one of you put it, you've got to develop an entrepreneurial spirit. In point of fact, you really do. Remember, they borrowed the word entrepreneurial from the French, because the English word was undertaker, but you have got to undertake to be innovators. These are the terms that we use—"innovators," "inventive," "risk takers," "be imaginative," "take initiative for new ground," "take chances." These are very easy to say on a platform, especially from somebody who isn't running the program, but there is a point in this that's worth calling to your attention: unless you test the practical limits of tolerance of the people who set the standards of your performance, you never know how far you can go.

I think this was the major theme of this conference. I think the people in major positions of authority in this enterprise were saying: we'd like to see things more creatively done. Don't stick to the letter of the law. If you take a chance, be sure of your ground, but take a chance.

Let me conclude. A stranger to these gatherings can't help but be impressed by the historical meaning of your effort. I hope you also have that sense. I think you are dealing with a very fundamental form of institutional change: the creation of new vistas for new patterns of institutional development in the country. What you are doing now is not the final form of your work. At your second Annual Meeting, you will have taken on some change. You may not be out in phase two yet, but someday you will be in phase three and phase four, then phase five, before you return and your retro-rockets have to be put on. I think you are involved in a major adventure, in the development of American democracy. I think the country is a lot stronger for the fact that you have been around for eighteen months.

SPONSOR WORKSHOPS

Many suggestions developed from the conference workshops where sponsors met to discuss problems and exchange ideas. Here are some highlights of these sessions:

Of all program concerns, the most frequently mentioned was the need to strengthen the *remedial education* offered to out of school enrollees.

These suggestions were made: Use the informal approach rather than a structured classroom situation. Organize an ungraded program with a high ratio of teachers to students. Concentrate on basic literacy, tieing the remedial program to reading and filling out job-application forms. Pay enrollees hourly wages for time spent in the classroom.

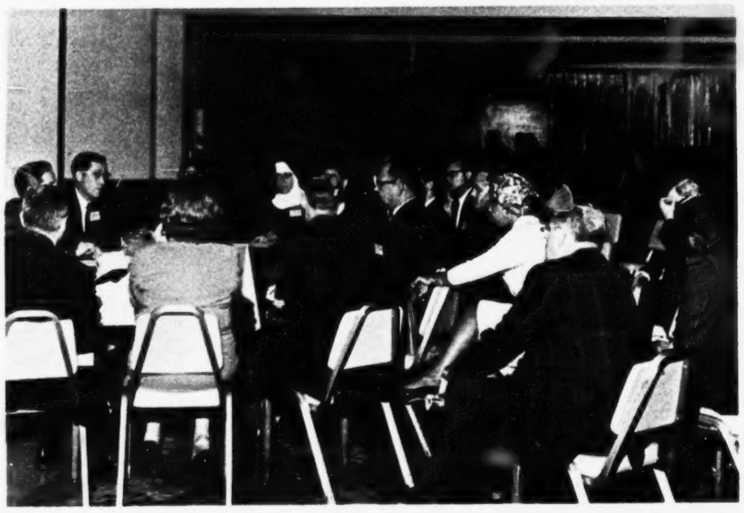
Sponsors suggested these resources for obtaining remedial education: Classes set up by corporations for their employees that might be opened to NYC enrollees; Adult education evening classes; Special tutoring services offered by some school systems, and regular school remedial reading programs which enrollees might be permitted to audit.

Workshop members agreed on the need for *better communication* between sponsors and between regional and national offices of the Neighborhood Youth Corps. They asked for more regional meetings; additional visits to projects by regional and national directors, and a directory listing all project directors.

Better service to enrollees would result, some sponsors said, from *better coordination.* They encouraged each other to make better use of community and volunteer groups; asked for more information about national and local programs related to NYC; explored the possibility of obtaining medical services for enrollees through military hospitals, and recommended the setting up of local inter-agency councils.

Many agreed that "outreach" was the clue to good *recruitment.* They pointed to the former enrollee as one of the best recruiters and "word of mouth" as one of the best techniques.

In the area of *administration and policy* the sponsors had many suggestions: Many were dissatisfied with the present family-income criteria for selection. Some asked that the age requirement be lowered to 14 years. Some requested that high school graduates be permitted to participate in NYC during the summer immediately

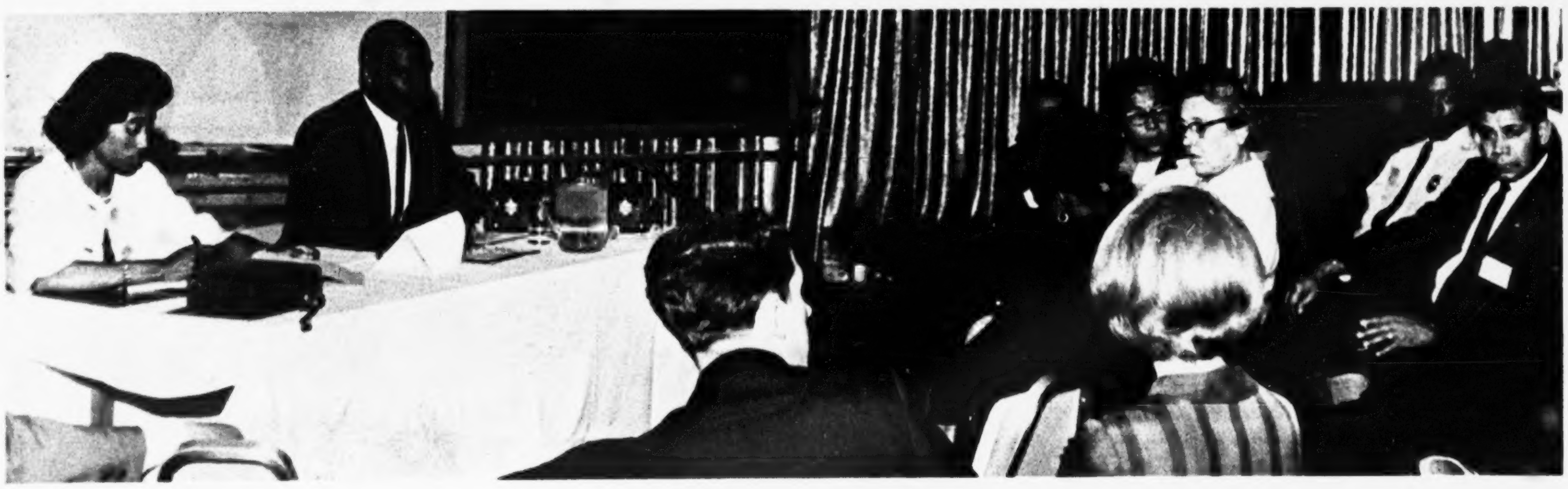


(Top) A forum for the ideas of specialists in the field of youth employment and related fields and NYC project directors. (Middle) An opportunity for project directors and national NYC staff members to view and share experiences and make suggestions which will enrich and refine the program. (Bottom) Technical workshop sessions relate the program's goals to the changing needs of local communities.

following graduation. Some asked that more decision-making authority be transferred to the regional directors; others for an increase in the ratio of funds permitted for administrative costs. Some of the sponsors saw the need for more continuity in funding and explained that the time lag between contracts made it difficult to maintain a competent staff.

In their discussions of *program content* the sponsors stressed that all work assignments should be productive and all programs should emphasize good work attitudes and work habits. Some participants emphasized that out-of-school projects must, to be successful, include good remedial education components and job-growth as well as job-attitude. Several opinions were expressed on "enrollee aspirations." Some sponsors said that counseling on aspirations should be related to an enrollee's ability: others pointed to the need to encourage youths to achieve high level positions. Some pointed out the need to upgrade attitudes toward service jobs by arranging for enrollees to meet and talk with persons who could explain that service jobs were worthwhile.

Enrollee participation in program development was encouraged by some sponsors who urged regular meet-



Panels, clinics and workshops provide intensive exploration of special problems.

ings of enrollees and project directors; enrollee councils to help establish project rules, and counseling assistance to new participants by former enrollees.

Generally, workshop members agreed on their responsibility to help enrollees *plan the next step after NYC*. They saw the need to help enrollees prepare for civil service examinations and refer enrollees to training programs that logically follow NYC placement. They suggested closer liaison with labor unions, business and industry.

Excerpts from:

THE CHANGES WE NEED

MISS AYLSWORTH: These are the changes that I would like to share with you, gathered from enrollee groups discussing the topic "What We Want from NYC."

The first thing is the vocational programs. We would like more enrollees, more enrollee involvement in planning for vocational training. No enrollee or individual, before he even starts his job, likes being told "you are going to a certain place and take a typing course, and then you are going to take this job." They would like to have some say in what their vocational training will be.

Enrollees should help participate in setting up counseling sessions. Constant availability of counseling for in-school and out-of-school enrollees should be offered. Group counseling for enrollees, sometimes supervised by enrollees themselves, should be provided.

More training-related jobs. A job should be challenging and one that will develop skills. At this point there are too many menial tasks being assigned to enrollees. Enrollees should not be asked to perform tasks that other people do not want to do. Enrollees could be placed in a non-professional capacity in a program, such as recruitment.

There should be paid pre-training for the enrollee to prepare him for the job he has been assigned. This should be done two weeks before he is going on the job. This could come after pre-enrollment counseling.

More qualified sponsorship. Sponsors who are educated, knowledgeable, competent themselves, interested in youth and their problems, and dedicated and personally committed to the program should be there.

Programs for married enrollees should be different from those of other NYC enrollees, including counseling, job placement, salaries, and other benefits.

Enrollees should have the opportunity to move from job to job and to gain more experience, to enhance their human relations and their ability to get along with people, and to increase their knowledge of the world of work.

NYC should provide visits to industry, to business, to observe the kind of jobs that are available and to increase job knowledge. This should be done through NYC as part of the job training, therefore on paid time.

Enrollee Report presented by /

Sally Aylsworth, NYC Enrollee
Wichita, Kansas

There could be an NYC Academy outside the school system for out-of-school youths. This could be run for the project and would set up vocational, cultural and social programs. This could be part of the training of the enrollee, administered by the project, therefore paid by NYC funds.

There should be more publicity starting at local levels and going up to enhance the image of the NYC enrollee. He should not just be a recipient of a "poverty" program, but one who is investing, through his own efforts with work, in the future of his country. This investment on the part of the youth today will guarantee an adult population that will be better informed and prepared to contribute, not to take from society. The image must improve, and publicity can do it. There should be some kind of uniform, such as a jacket or shirt.

The in-school enrollee age limit should be lowered and the out-of school age limit should be raised.

We would like to see the time limit for investment in the out-of-school program increased and made similar to the in-school program. Preferably an out-of-school enrollee should stay in the program until his counselor or project director is ready to put him in the world of work.

There should be more use of the maximum hours rather than of the minimum.

Salaries should be paid on a weekly basis. Merit raises should be incorporated in the program as soon as possible, increments, now exceptions, should become the rule. Basic salaries should be established according to the location of the program and the job that is being done by the enrollee. Hours in the in-school program should be increased, if they do not interfere with school work.

There should be a letter, or certificate of recognition, or recommendation to be used to show a future employer. This letter could help the enrollee bridge the gap as he moves from NYC to a job, or other training. The project staff should give more personal recognition to enrollees and this also should be done by the work supervisor. The personal touch is needed.

Geographical locations of jobs should be more flexible so that the project director can transfer enrollees to places where there are jobs. Therefore more transportation money is needed within the projects.

We would like to hold enrollee conferences within our own states or regions, and would like a National Conference for enrollees. This would be under supervision.

Within each local program, the enrollees should have a self-government committee that could be called NYC Enrollees Congress.

There could be an NYC enrollee newsletter edited by the enrollees. This could be either a regional or local newsletter. This would enable NYC enrollees to stay in contact with each other. There could also be a pen-pal program of some kind.

We enrollees would like to have the minutes of the first National Conference Enrollees Discussion Groups, so that we may share them with other enrollees in our projects.

We enrollees would like to see Congress appropriate more money so that these suggested changes may be made, changes that will result in not only quantitative services for enrollees, but qualitative services for enrollees.

Excerpts from:

SOME REACTIONS

MODERATOR:
Raphel O. Lewis, Executive Director
Community Action for Youth, Inc.
Cleveland, Ohio

PANELISTS:
Cyril Tyson, Executive Director
United Community Corporation
Newark, New Jersey

Gilbert David White
NYC Enrollee
Baltimore, Maryland

Jack White, Sponsor
East St. Louis
NYC Project
East St. Louis, Ill.

Oliver Terriberry, Sponsor
Georgia Mountains
Planning and Development Commission
Gainesville, Ga.

OLIVER TERRIBERRY: One common theme seems to be developing. You might say we are trying to develop a powerful train. We are trying to come up with a program much like a gear or a series of gears, where we can reach back into low and raise these people up to where they can be integrated into the main stream of life. We have found two basic problems. One is in education and the other is in the lack of experience. The term that has been bandied about is prudentializing. What is it? It simply means getting people in a position where they can go to an employer and obtain a job.

We seem to think that the Neighborhood Youth Corps offers many of these opportunities. I feel it does. But I'm going to put in a plea: don't mold us. Don't limit our broad-based activities, and don't think that NYC is not broad-based. NYC and all these other Federal programs have relationship, one to another. They need to be interrelated to each other. We have got to get off the approach of developing jobs for the sake of jobs. This thing must lead somewhere.

JACK WHITE: The kids who are coming into NYC can observe very closely. In a very short period of time they learn all the tricks of the trade: how not to work and still make a living. As a matter of fact, I remember a young man telling me, "Look, baby, I can hustle more than thirty-seven dollars on the corner." And I believe him, the way he was dressed.

I think that in our efforts to give status to certain kinds of job classifications, and at the same time, in our efforts to try to get employers to lower certain kinds of qualifications, we have sort of arbitrarily decided that certain kinds of jobs are not desirable. I know among certain groups where it has been traditional that certain kinds of jobs were the only available jobs, these jobs have become distasteful to this group of people. I think the time has come when we have got to sort of reevaluate our approach to telling people that, look, a maintenance aide is not really a bad guy. You don't have to be a doctor, maybe you can work up to that a little later. Also we put supportive services in, somebody else cuts them out. Now that there is more money available, we are going to put them back in. If they get cut out, we are going to write letters to you asking for a real reason why. Also, in our effort to put youngsters on jobs, have them move through NYC with the jobs, sometimes we are forgetting that many of these youngsters are still kids, they are still sixteen, seventeen, eighteen years old.

Many areas lack community services and lack skilled trained personnel to run these programs. I am very concerned, because even in the area of supervision I was shocked to find some work supervisors on work sites in some projects who found difficulty in reading beyond the third grade level themselves. So this presents a problem, particularly to some of the areas outside Chicago and New York.

CYRIL TYSON: I think we ought to pick up Ken Marshall's statement about the role of spin-off community corporations of the poor that can begin to provide a whole range of services, and the role of Neighborhood Youth Corps individuals in these kinds of programs. I am including here even youth businesses over and above non-profit type corporations. I think this has not been explored to the fullest at all. I know that we have done a little of it in Newark, it's been quite successful.

I think that we ought to be very careful about the extension of two years in the Neighborhood Youth Corps programming. I think that if we are going to extend the training for two years we better hone in quite clearly on what this training is all about and where these young people are still going. I think that the job area, the training area is still very circumscribed.

Many of our Neighborhood Youth Corps youths are not retarded. Many dropped out of school because, frankly, it was the right thing to do. They weren't learning anything there and the action shows an ability to make that distinction. There is a whole range of job opportunities, other than with your hands (and I don't degrade that) that these young people can be developed to perform. I think we have to be very careful at sixteen, seventeen or eighteen, not to lock these young people into a life style, but to provide the opportunity in a kind of reception center to determine what, in fact, they can do so that they can move into positions of relative skill.

My third area of concern was mentioned in part by the first speaker: I think we have to creatively utilize the whole range of manpower programs and social service programs under the community action section to make it possible for a person to move in and between programs.

There is no reason why a Neighborhood Youth Corps person could not move from there to OJT, if it is evident that he has the potential for the particular kind of skills that are needed in the labor market.

The next point relates to the creative use of the administrative dollar, of not only Neighborhood Youth Corps programs but all programs. We are in a money society, we are in a capitalistic society, and there is no reason why the social service dollar should be a one way dollar. There are many spin-off businesses that could be created whose services you would need, and you can train the poor to perform those services.

Finally, we have to think about ways in which programs can be developed, and the youth can be involved in training, that will then make it possible to send youths off into productive private areas.

GILBERT DAVID WHITE: My name is Gilbert David White. I am from Baltimore, Maryland, and I am scared, because I am not a speaker myself. I did listen to what these gentlemen have said and I am impressed. I thought for a long time that we needed a youth movement in Baltimore, Maryland, and all over the country, because today is for the youth. If the youth is set aside—and it is said if you don't have a high school education you cannot make a living—then there are going to be a lot of children, a lot of youth from sixteen to twenty-one who are not going to have a chance, although they have the ability to do this.

And I am honored to speak before you ladies and gentlemen and delegates and speakers. My topic is that NYC is the greatest thing that I have heard of yet, for three reasons. We have an in-school program that gives the boys and girls who are in school a chance to earn extra money to do what they want to do with it. Next we have the out-of-school program. These are youths from sixteen to twenty-one who have dropped out of school for various reasons. Number three is the summer program for the youth to earn money to either go back to school or continue night school. NYC also gives different job opportunities in recreation centers, in offices, municipal buildings and things like this.

The program also teaches us to work with our brothers and sisters, no matter the race, religion or creed. And this is the big problem today. Some people, no matter if they are white or negro, think they are predominant. But they are not. We all have to learn that we must get along with one another. Because if not, we won't stand. And that is about all I can say.

Excerpts from:

THE DILEMMAS AND POLITICS OF COORDINATION

MODERATOR:
Martin Rein, Presiding Associate Professor
Department of Social Work and Social Research
Bryn Mawr College

PANELISTS:
Curt Aller, Director
Office of Manpower Policy, Evaluation and Research, Manpower Administration
U.S. Department of Labor, Washington, D. C.

Erwin France, Director
Youth Opportunity Centers
Chicago, Illinois

Sam Samples, Director of Counseling in Residence
Breckenridge Job Corps Center
Morganville, Kentucky

Roslyn Kane, Manpower Specialist
Community Action Program
Office of Economic Opportunity
Washington, D. C.

Marion Thorpe, Director
Office of Field Operations
Neighborhood Youth Corps

MR. REIN: We are focusing this morning on the relationship between problems faced by youth and programs designed to address themselves to these problems. The assumption we are proceeding on is that there is a spectrum of services and a spectrum of programs. So, the question that the panelists will be addressing themselves to is the question of which kids go to which types of programs.

MR. ALLER: I would like to emphasize and re-emphasize that we have been putting together a remarkable kit of tools in the last few years. These tools are designed to enable us to work with all of the unemployed in our economy, and to move the unemployed as rapidly as we can into jobs, and more importantly into meaningful work opportunity that will enable them to move up both in income terms, and in terms of satisfying other important objectives of life.

This kit of tools would appear to include now nearly all of the tools we need to be able to pull off the shelf the right tool to fit the needs of a particular individual. We are not any longer fully in the situation where we have to trim and crowd a particular individual to fit an imperfect kind of solution. We can say that for youth, we may be close, not only to having a variety of tools, but possibly the magnitude of effort that is required to handle simply the numbers that we face. Now, we will know more on that latter question after Congressional action, which is in the works, moves ahead, and if it is hopefully as successful as I think it will be.

Third, the move from conception to reality is neither easy, nor accomplished. and the Federal role can provide part of the answer. I would argue most strongly that the real job has to be done at the local level. There are a thousand and one ways to do the job. The key, I think, can be found in the initiative which people such as yourselves bring to the task, and more importantly, the imagination that you bring to it. I would like to cite just a simple example. If any of you have looked closely at the New Haven experience, there you will see an outstanding example of what imagination can do on the local level, pulling all of the variety of resources that are available in our system, and putting them together in a kind of manpower training and utilization system at the local level that makes sense in terms of the individuals that are the targets for all of these programs.

A few words about the Manpower Development and Training Act. The regular manpower training activities consists of two kinds of programs: On-the-Job-Training, where the individual moves into a work situation, is paid by the employer, but is trained for the particular set of skills on the job. This is often accompanied by off-job classroom training, particularly where literacy is a problem, or where other kinds of classroom construction is needed.

The other main activity of the Manpower Development and Training Act is what we call institutional training. There, the unemployed person moves into a full-time school setting for the purpose of acquiring in that school setting a set of skills that enable him to move into a job. For the coming year, for the country as a whole, we will be attempting to split our efforts in these two strengths equally. One hundred and twenty-five thousand people will be going through on-the-job-training, a hundred and twenty-five thousand through institutional training. Moreover, we hope to emphasize the disadvantaged more heavily than we ever have before in both of these programs. It is our hope that we will be able to use sixty-five percent of this total effort for those with less than eighth grade education, for those without any meaningful work experience, for those who are disadvantaged in terms of color or minority status, and so on.

Now, finally, let me just mention quickly the experimental program. The whole objective of the experimental and demonstration program is to enable us to experiment and to demonstrate a new way of accomplishing our job, or to test out a number of possibilities. The purpose is to discover and then to validate ways of doing the job that can then be transferred into what I call the main line programs. NYC is a main line program now. While we will be picking out particular groups of severely disadvantaged youth, for purposes of working with them this summer, our objective will be to discover how we can develop techniques that can be put on a mass or routine basis and used generally throughout the country, either through the expansion of the kind of things that you are doing regularly, or, if this is what we discover, by developing a new kit of tools for this particular category of disadvantaged youth.

MR. SAMPLES: The Job Corps has in its programs young men and women between the ages of sixteen and twenty-one. Based on the first twenty thousand students, the average young man and woman in the Job Corps is a teenager, seventeen and a half years old, unmarried, unemployed, and looking for work; has gone to school through the ninth grade, but reads only at the sixth grade level; can do arithmetic at the fifth grade level; has been out of school nearly a year; comes from a family of six, that lives in over-crowded, sub-standard housing. Sixty-nine percent of these young men and women have not gone beyond the ninth grade. Only eighteen percent completed the tenth grade. Only six point nine percent of all Job Corps enrollees have completed high school. Nearly sixty percent read below the sixth grade level, and about twenty percent read below the third grade level. More than fifty-five percent have been living in sub-standard homes before they entered the Job Corps. Fifty-nine percent of the men and sixty-five percent of the women came from families where the wage earner was out of work. Sixty-eight percent of the enrollees have been asked to leave school, mainly to help support the family. Seventy-four percent of all enrollees are in the sixteen to eighteen year bracket. Fifty-one percent are below eighteen. Ninety-seven point eight percent of these young people are single. Only five point two percent of all the Job Corps enrollees have been in the Armed Forces. Two-thirds of this group have tried to enter the Armed Forces, but were rejected due to mental or physical reasons. Twenty-six percent of young people in the Job Corps have never held a job of any kind, and of those who have worked, seventy-five percent held unskilled jobs.

The average Job Corps youth needs more than vocational training, more than basic education. There must be a multiple approach to solving these kinds of problems.

DR. THORPE: We serve equally about fifty percent males in our program, in our in-school and out-of-school programs, and fifty percent females. The typical enrollee based upon the first fifty thousand analyzed is seventeen years of age. If out-of-school, the enrollee has been out of school for at least one year. He comes from a family of five, and has, if a male, a very low potential in terms of being ready to pass the kind of exams necessary to enter the Armed Forces. The current concern with our very young program is with the question of integrating necessary supportive services with the work experiences that are given to the youth. It is a concern that has been voiced by the first framers of the legislation, and by the Labor Department Task Force that designed the implementative vehicle; by manpower specialists with some experience with youth employment problems, by the M.D.T.A. and by committed sponsors, who saw needs and saw ways of meeting them.

To talk about the dilemma and politics of coordination, in large measure, is to talk about the supportive services that ought to be credited to a Neighborhood Youth Corps project to make it a viable project.

The first problem is the specific identification of the nature and quantity of each necessary service, together with the appropriate delivery system. The second problem is the availability of such supportive services, once these are identified. The third major difficulty is in the problem of coordinating existing agencies with the new agencies. The fourth problem is an administrative one of timing the initiation of projects with the provision of services.

Problem number five revolves around conflict and standards. The Neighborhood Youth Corps standard of eligibility, for example, may frighten off some groups that might be willing to provide services. They simply see themselves serving a wider group than the youth that the Neighborhood Youth Corps is focused on. The Neighborhood Youth Corps sponsor is then caught in a squeeze and must look for some other way to get the services. We do find ourselves in a position of having to serve those most in need. There are over three million youngsters in these United States who could benefit from our services. We can only serve about one-tenth of these.

The final and very serious problem is the rigidity of some school systems. Basic to the concept of work experience for disadvantaged youth attending school is a conviction that money alone is not enough to keep them in school. The program is aimed at the potential dropout who is more apt to leave school because of personal failure and/or institutional failure than because of acute

need for money. This is not to say that money is not important. We get considerable evidence that it is. What we are really trying to say is that in addition to the money must come the kinds of supportive services to make sure that the youth drops in on meaningful life, and does not produce another statistic in terms of labor unemployment at some future date.

MR. REIN: We now shift base from the program to the agencies which route and send youngsters to these range of programs. But life is by its nature complicated, so that the first routing agency we will talk about not only refers youngsters to these programs, but also has a program of its own as well.

MISS KANE: We talk frequently about the hard core poor, but what are we talking about when we talk about hard core? Are we talking about those that are poorest, or those who, without our services, could not get out of poverty? Because this is where the C.A.P. is placing its effort: to work with those who could not get out of poverty without assistance. It is obvious, with the number of people who could qualify for all of these programs, that there is simply not enough money to serve all of them at once. Some decision must be made as to where the priority will exist. Most importantly, the determination of what is the single greatest problem within the local area, must be made at the local level.

For those areas of the country that have a high retention rate, that hold youngsters in school, either by law or by fact of the good education system, until they are eighteen, it is reasonable to place an emphasis on serving the in-school group. In those areas of the country where, by the age of sixteen, fifty percent or more of the poor, hard core or otherwise, are outside of the school system, it is unrealistic to talk about serving the hard core poor within the school system.

If we examine the legislation itself, it seems relatively clear that Congress has said that in the Neighborhood Youth Corps, the first and primary effort is to be made for those who will return to school, those who are out and who could be brought back to school. To do this realistically, services must be offered in the school to make it possible for those who return to school to get back into school. When we talk about supportive services, it would seem that it would be essential that some kind of a vestibule within the school must be established in order to receive those who are willing to return to school.

The second group that Congress seems to emphasize are the potential dropouts. Although the potential dropout is considerably higher among the poor than among the non-poor, it is not necessarily lack of money that defines the potential dropout. There are characteristics that have appeared over and over again in studies done on those who drop out of school. Today, it is quite simple to use those characteristics to identify the potential dropout at the seventh grade, and many say at the third or fourth grade. After that, the legislation seems to emphasize those who have already dropped out.

As to the Job Corps, the definition seems to emphasize those who need a residential service. This group would appear to be those who live in markedly rural areas and who will be taking up residence in urban areas and those living in urban areas where their home environment is such that they cannot utilize other programs available to them in their local community.

O.E.O. itself has been emphasizing the fact that it does not wish to provide competitive services to those already offered by other agencies, but rather it sees itself in two roles. Number one is providing the funds that either cannot by legislation, or cannot by administrative decision, be provided by the other programs.

Secondarily, in those areas of the country where the services that are offered are not responsive to the needs of the poor—there, and only there do we see that O.E.O. should provide competitive services.

MR. FRANCE: In many respects, the Youth Center is an idea that reflects and represents a reversal of priority on the part of the Department of Labor, in the terms of employment service per se. For many years, the State Employment services have been involved in working primarily in the area of placements, and it recognized, with the help of a variety of sources, the fact that by 1970, over a quarter of the work force in this country would be comprised of people under the age of twenty-five. At the same time, that this was a reality, there were larger numbers of kids dropping out of school, or being graduated from high school unready to meaningfully enter the world of work.

The Youth Opportunity Centers were created with essentially three objectives in mind. The first was increasing the employability of youth. I think that probably is one of the most important objectives. The second was developing job opportunities for youth, and the third was placing youth in a suitable job.

The Youth Opportunity Centers across the country are as varied as are the Neighborhood Youth Corps projects across the country. There are certain pieces of program built into all of them: counseling, testing, referral to employment and training, and so forth. Essentially, our policy revolves around the notion of doing that which is best for the kid. We depart from the idea that in most instances the sixteen to twenty-two year olds with whom we are working are not ready to enter into the world of work in any meaningful relationships on any kind of a lasting basis. We recognize fully that at this point in today's labor market, with it being tight as it is, it is possible for most young people who have any amount of skill to get some kind of a job, but in these opportunity centers, we have been trying to take the long range view. We have been trying to see the big picture and trying to identify some course of action that is going to lead to long range employability on the part of the young people whom we see.

Disadvantaged means different things to different people. Essentially, I suppose that the concept of disadvantaged means those people who are economically disadvantaged and culturally disadvantaged, and all of the other kinds of disadvantages that have been described and discussed at this conference. But at least in terms of Chicago Y.O.C. programs, when we talk about kids who are disadvantaged, we talk about essentially those kids who for one reason or another have an impediment that keeps them out of the world of work in a meaningful way.

When the question is raised as to what kids go into what programs, I think I have to say very quickly that there is no discreet formula. We start out with some assessment of the kid. What are his interests, what are his aptitudes, what is his present level of functioning, and what is the reality of an existing program, in terms of the program's readiness for the kid. Trying to match up a program with the interests of a kid is a very difficult task, and relies very heavily upon the judgment of the counselors. There is no simple, easy answer to the matching of kids' needs with the existing programs. In some of the cities, the Youth Opportunity Centers have very few programs to which to refer kids; in other cities, such as Chicago, there are many.

Sometimes I think that we ought to quit talking about coordination and talk about the process of communications. I think that we have got to look at the process of communication in terms of how do we develop working relationships, and how do we carve out appropriate roles for the various agencies that are a part of this whole system of youth employment services, and the supportive services that go along with it.

One of the major difficulties involved, particularly as it relates to public and private cooperation, is the cutting across of political jurisdictions.

The second problem to look at is the identification of appropriate roles for agencies—the need to carve roles out in such a manner that each of the agencies is clear with respect to what its contribution can be, and the need to make certain each agency is not asked to give up its own vested interest for the good of something which nobody is sure of.

The third problem which we face in new projects, in old line bureaucracies, or other established agencies, is the development of staff attitudes that are conducive to coordination and communication.

Excerpts from:

PRESCRIPTION FOR CHANGE

MODERATOR:
Eli E. Cohen, Executive Secretary
National Committee on Employment of Youth

PANELISTS:
Nathan Glassman, Manager
Training Staff, Linde Division
Union Carbide Corporation

Rev. John W. Yanta
Project Director
San Antonio, Texas

George Wiley, Director
Poverty-Rights Action Committee

Rodney Gibson, NYC Enrollee
Schenactady, New York

REVEREND YANTA: What is the mainstream of your community? It is the activities of your Chamber of Commerce, your City Hall, your County Courthouse, your symphony, your civic celebrations and cultural events. The NYC enrollee must not only become familiar with them, but also must become a part of them. The NYC must assist him to become a better citizen.

The community must be brought to the NYC; the enrollee must be taken to his community.

Bring in the top leaders of your community to give career guidance and group counseling talks to your enrollees. Making the greatest impression on the NYC enrollee will be speakers sharing the same ethnic background as the enrollees. Hearing a community leader who overcame obstacles so familiar to them is a source of inspiration in their young lives. In group counseling and leadership courses, the NYC enrollee will gain access to the major opportunity systems of his community, that is education, employment, housing, legal rights, social and consumer service. Invite your community leaders, members of the press and personnel directors for a first-hand look at your project through a guided tour. NYC sponsors, you are not fighting the war on poverty alone! You will not win the war against poverty in your community until the conscience of every citizen in your community is aroused.

The enrollee's newly gained theoretical knowledge of the community must now be translated into the practical—tours of city hall, courthouse, universities, newspapers and factories. If the NYC is for civic improvement, how about cultural improvement? Have you thought about a visit to a place of historical importance in your area? The symphony? A carefully prepared tour through an art gallery? And if you have female enrollees would it not be good to expose them to the normal society in your community by attending a style show?

One of the best ways to develop tomorrow's leadership is through responsibility today. The more responsibility attached to a work classification and work assignment, the more self-confidence and self-assurance will be gained by the youth in his preparation for adulthood.

When guest speakers are scheduled, let the enrollee make the introduction. This will necessitate an interview beforehand, another way of bringing the enrollee into the community.

A leader must know how to influence others. May I recommend that parliamentary law be part of NYC training? Again, not only the knowledge of parliamentary law, but the practice of it through an organization for the NYC enrollees, similar to a student council. These young citizens will soon respect the opinions of others, learn that the minority must be heard, and the majority must prevail. In addition to the officers, could there not be committees relating to poverty, education, employment, housing, community services, and civic information? Couldn't the NYC Council assign an enrollee to attend the weekly meeting of the City Council, and the County Commissioner's Court, so that they can make regular reports to the total NYC membership? Could we not develop civic responsibilities by regular capsule reports of the main activities of your State Capitol, the Congress, and even the United Nations?

People write letters to communicate. A community communicates to its citizens through newspapers. The homes of the poor do not have a newspaper. The enrollee must learn how to read the newspaper, to separate the essential from the trivia, to evaluate the editorials, to have some knowledge of the stock page, to be able to locate the obituaries, and how to locate a job in the classified section. NYC sponsors will do well to provide a few copies of the daily newspaper in the Group Counseling Room, or your library.

There is a mainstream of society in your community. If enrollees do not get off the banks and into the mainstream before their termination, they will probably never participate to the full extent of their capabilities in the workings of our society.

The importance of the individual enrollee cannot be over-stressed. There is a multiplier effect. The leadership qualities developed by an NYC enrollee will rub off on his parents, brothers and sisters, friends, relatives and neighbors. The stone that is cast into the lake is at first a circle only as large as the stone, but then it begins to multiply itself a hundred times over. The cycle of poverty must be broken, will be broken and is broken if the NYC enrollee becomes part of the mainstream in his community.

MR. GLASSMAN: This conference has spent a great deal of time talking about establishing a bridge between program and work, and yet I sometimes wonder if we even talk to each other at all. Let me structure the kind of a situation I mean. You have arrived, and you are explaining your position (to an employer). You want him to take a kid. The first thing you will find possibly is that you are faced with explaining the purpose and the objectives of the Neighborhood Youth Corps. You can't judge the employer too harshly. After all, how much do you know, you must ask yourself, about mergers, or acquisitions, or the technological developments that are important in his field? When he understands what you are trying to tell him, you watch that troubled expression creep over his face. Then begins the reply that I am sure that you have heard again and again. The reply says, "Well, I don't know. Gee, our jobs calls for a college degree or a technical school certificate or some level of education and preparation that is just about two stages above the level you are talking about." If you become involved in a discussion with him about the skill level of the job, and what your people bring to it, you have lost the argument. This is only in part the question he is asking, and only in part the reservation he has.

Consider it for a moment from his point of view. He is faced with a situation where he is not even certain, in this day of technological change, of what the job exactly is. He doesn't really know. He knows that he has a great many new jobs that he has never faced before. He knows that he is going to have new ones following those new ones very quickly. What kind of guarantee can you offer him that your program is preparing a kid for his kind of job when he himself doesn't even know what the job is? As a result, he leans back on the certification situation, which traditionally has been the preparation for jobs. He leans back on the educational system, which traditionally he could rely on as a measure of the kid.

He asks a second question: What is the learning potential of this boy? What can I do with this boy fifteen, twenty years later? Five, six, seven, eight jobs later—in jobs not even invented at this point?

He asked a third question: Has the kid got the proper work attitudes? Essentially he asks: Can the kid exist and make progress in a highly structured authoritarian society? Let's face it. The democratic business organization is still mainly in the pages of the Harvard Business Review. The kid has to learn to live in this sort of structure. We are talking about standards of behavior, deportment, dress, respect for authority—all of the usual patterns that are expected of the boy. He doesn't know that your program has given the boy the preparation for this. What he does believe is that the educational system has made the boy jump through enough hoops so that the chances are good that it has given him some basis for understanding.

What hope is there? NYC faces the job of convincing the employer that it is as good a certification of the preparation of a boy or girl for work as any of the older and more conventional certification agencies. Can you do this? I think you can. It is going to take time, naturally. Now, you can argue that there is not time, but some time will be necessary. After all, it wasn't so very long ago that the military was not an acceptable certification for work either. It is now. Part of the problem will be answered by continuing full employment, so that employers will not be tempted to use the educational system as an elimination device rather than a preparation device. Part of the answer is continuing research on our part, on yours and on the part of the universities, into the nature of work, and the nature of jobs. In this way we will be able to more effectively tailor skills to the necessities of organization job needs. Part of the answer is that changes must be made in the educational system. Probably the most significant part of the answer is the continuing communication that must exist between you and us.

The burden of capturing our attention depends largely on you, and how effectively you push into us. Keep on pushing. Keep on working at it. This is the only way we will be able to work effectively together.

MR. GIBSON: I know what is running through your minds. You know I am scared, and you are right. You see, I never spoke in front of a big group before, so I wish you'd bear with me.

I hear that down in New York, to work in the Sanitation Department, you have to have a high school education. I think anybody can throw a garbage can on the back of a truck, and he doesn't need to go to school for it. They tell you, when you go down and try, that they don't have anything. To push a broom across the floor, you have to have a high school education. I am not against it, I dropped out of school, and it's a rough way to go.

You take people for instance. Well, take a boy. We'll call him Dudley Duray. Now, Dudley Duray, he dropped out of school. The counselors tried to talk him into going back, but he won't. They want to know why he won't return to school. He doesn't tell them, because he really doesn't know why. Well, down here in the Youth Corps, at the convention, I found out why he doesn't go back to school. If he goes back, he is going to drop out again, because they are going to offer him the same thing that they offered him before.

You go to a job nowadays. They've got wall to wall carpeting. They've got beautiful pictures on the wall. You walk in the door. The man stands there. He's looking at you down through his nose, and he hands you a bunch of papers for a test. He throws you in the room. You come out of the room. He says, "Okay, go, we'll call you later." Now, I mean, this is cold, this is really cold. I mean, as far as I know, he doesn't want you at all. To sum it up, I think that the people in the neighborhoods should get together with the Youth Corps.

MR. WILEY: There is an undue emphasis in the war on poverty on various kinds of remedial programs.

I would submit that the orientation of the poverty program is far too much toward accommodating the established political structure in the localities where projects are operating.

Now, I will submit that the basic question for a war on poverty is not the question of re-training and remedial work for the people who are poor, but bringing about the kind of institutional changes that allow a decent job for every person regardless of his training or educational level, or, failing that, bringing about a decent income for every person in our society.

I think that there is a major delusion afield that people like yourselves, here in this room, working in the Neighborhood Youth Corps, or working in other poverty programs are themselves the logical innovators for making changes. You are not. You, sirs, and ladies, are part of the establishment. You are basically instruments for the status quo.

It seems to me the kind of role that people such as yourselves can play is a role that facilitates involvement of people who are poor in understanding themselves and their condition, a role that helps them organize themselves in such a way that they can produce the political force that is necessary to bring about some kind of change.

I would say that basically the job for a program such as the Neighborhood Youth Corps should be to try to involve the people enrolled in meaningful organizations, through which they will be able to express themselves and their will.

The Credentials Trap/Address by

S. M. Miller,

Visiting Professor of Education and Sociology, New York University

In a recent crash program in Washington, a federal agency appointed a man uniquely qualified for a particularly demanding job. Probably no one else in the nation had his particular set of experiences which fitted this job so well. They were very pleased with his work and wanted to make him a permanent member of the staff. In order to gain regular status, he had to be rated by the Civil Service Commission. The Commission decided that he was underqualified for he position level he had, despite his excellent performance in the job!

This man had committed a terrible crime in contemporary America. He not only lacked a college diploma, but he had not graduated from high school! At 50, he was still labelled a "dropout" although he was better informed and more analytical than most college professors. He could not have a high-level rating even though he had shown a capacity to manage this difficult job and had fulfilled other tough assignments very well. His performance was ignored; his bout with formal education years earlier determined his eligibility.

Each of us could tell of other people who were disqualified for jobs that they could have managed well because they did not possess the credentials for the job. In a growing number of occupations, individuals must meet requirements set by law in order to be eligible for particular jobs. These legal requirements are found not only in the professions like law and medicine, but are proliferating in occupations which would seem to need less governmental supervision of possible newcomers than do the professions. More important is the fact that employers have been constantly raising their expectations of what employees should bring to the job in terms of formal qualifications.

Education as Social Sifter

The big stress is on education—diplomas, degrees, certificates. Without educational credentials, an individual is barred from a growing list of occupations. We are increasingly judging people in terms of their educational credentials rather than in terms of their performance and potential performance. As we become increasingly unsure of how to judge the performance output, we amphasize the educational input of the performers as the criterion of achievement. Education has become the major route of economic advance in our society.

It was not always so. Earlier in this century a variety of routes to economic advance could be traveled. One might develop his small business into a successful larger enterprise. Or he could work from a low-level position requiring little education to a high position in a big company. Today, without education—and that increasingly means a college diploma or beyond—the chances of climbing the occupational ladder are slim. We have reduced the roads of social mobility to one main highway—that of education. Those who lack educational credentials are barred from the good, secure jobs.

The uncredentialed now serve life sentence of limited chances—no matter what their talent and potential. Less and less can experience be substituted for education in civil service regulated jobs. We are in effect ruling out the possibility that individuals can get the kinds of experience which are the equivalent (or more) of a college education.

The Wastage

We are establishing principles for excluding people from the economic mainstream rather than constructing procedures which will bring more people into decent employment. The result is a great wastage.

The talent and potential of many persons are not used because they have a spotted educational career. Society suffers because of the under-utilization and the individuals lose because they cannot get adequate and satisfying employment. The current emphasis on credentialism and testing serves to sort people out of the main and well-rewarded economic system rather than bring them in. Testing could be used to identify the different kinds of aids individuals need if they are to develop; instead, it is most frequently used to select the most easily useful persons and to consign the rest to the oblivion of "low scorers" or "low achievers."

The credentialism emphasis economically disenfranchises the low-educated in American society—and this means most Negroes by today's educational standards. Whether this is the intent or not, the stress on degrees and diplomas makes it extraordinarily difficult for those of low education, whatever ability they have, to move into the economic mainstream of this country. *The poor, the Negro, the low-educated are trapped by diplomas, overwhelmed by certificates, and tripped up by qualifications.* The credentials system is one of the central obstacles to our present national policy of increasing economic opportunities for the poor.

The Trap

We are in a credentials trap. We judge people on the basis of their education, ignore their potential and sort them into a second-grade job market with little chance of a decent job.

Employers may believe that the emphasis on high qualifications gives them a better labor force, but this is doubtful. The preliminary findings of an important study by the thoughtful Columbia University sociologist Ivar Berg show that at every occupational level, those of less education do better than those of high education. The less educated have less absenteeism, less turnover, less job dissatisfaction and the like. Getting people of higher education than a job requires is likely to produce low morale and productivity. Yet employers tend to search for workers with more education than the jobs demand and to exclude the low-educated who might do a better job.

The credentials system is irrational. It places too much confidence in the schools as an adequate sifter of talent and potential. It excludes rather than includes. It maintains and probably accentuates existing patterns of discrimination. It does not even appear to have a high payoff for employers.

The system is irrational. Today is the time to crack it. The labor shortage produced by Vietnam is a singular invitation to dismantle the credentials trap.

Strategies

What should be the strategies for change? Three approaches can be taken: (1) reduce the importance of credentialing; (2) multiply the ways in which one gets "proper" credentials and the time-points at which this happens; (3) restructure jobs.

Basically changing the credential system requires reducing the importance of education and highlighting the significance of experience and of potential. The fundamental assumption involved is that the low-educated have much more potential than they are given credit for. The orientation would be toward relatively open admission to jobs; then individuals would be sorted on the basis of their performance in the jobs. The aim would be to include more and more people into the possibility of getting the "good jobs." In order to do this we would probably have to provide a variety of services in order to help develop people. Education would be less used as the main way of assessing people's abilities and potentials; selection decisions, to the extent that they must be made, would be made at much later times than now; almost all would be regarded as having useful abilities and the effort would be to learn how to invest in each individual so that he or she does develop. Obviously, the private enterprise sector as well as the public and nonprofit sectors would have to be involved in any effort to reduce the present-day importance of credentialism. We may have to subsidize private enterprise to hire and to *develop* those who do not have the traditional credentials.

The second strategy is through the expansion of the ways of getting credentialed and the times at which the credentials can be gained. Today, if one does not get 12 or 16 or 18 or 20 years of education in the orthodox way of continuous immersion without a break in the apparatus of formal education, one has much reduced chances of gaining credentials.

We should more effectively develop school programs and procedures so that once out does not mean permanently out. Education and training will be increasingly a discontinuous process for the high-educated in American society, as they will need new kinds of education at various points in their careers. The same attitude should prevail towards those who have not successfully weathered the educational system to high school or college graduation or beyond. They should be in practice re-entering and benefiting from education and training at various points in their lives.

To some extent, the poverty programs are multiplying. They are new credentialing systems in our society. Experience in the Job Corps or in the Neighborhood Youth Corps or in Manpower Development and Training Act programs may not be primarily important in terms of providing skills. Rather, employers are more willing to hire youth who have gone through one of

these self-selection and molding systems. Neighborhood Youth Corps experience may be a new way of getting a credential which employers will accredit and accept.

By multiplying the number of credential channels, we make it easier for individuals to gain them. Those defeated by our educational system at age 16 might be able to get needed credentials at age 18 or 22. One should have second, third, fourth chances and ways of getting credentials. *The more different ways of getting credentials, the less the number of people who would fail to get some of the brownie points needed for acceptance into the main economy.*

We should recognize that even though we multiply the credentialing routes, some would always be failing through any credentialing system. Those low-income and low-educated youth who do not make—for whatever reason—the Job Corps or the Neighborhood Youth Corps may be even more disadvantaged in the job situation as the result of this new failure. We should constantly be paying attention to these unsuccessful individuals and developing ways of getting them credentialed. If we ignore the unsuccessful of the unsuccessful, we shall have periodic crises produced by the surprising "rediscovery of poverty" in the affluent society.

The third strategy is to change the structure of jobs so that less trained people can perform in them. This is the strategy of the nonprofessional occupation, which breaks down the tasks of a professional job—like those of a social worker or a nurse or teacher—into smaller units and combines some of the tasks so less trained people can do them. (Sometimes, the recombination produces services which the professional was not previously able to provide.) These essentially new jobs do not require credentials and are in fact being filled in povery programs by people with limited education. They also provide needed services in low-income communities and reduce the great unmeetable demand for professionally trained personnel. The job of the professional will increasingly be to make it possible for less trained people to do effective work.

We can see the possibilities of new kinds of less educated talents in changed professional jobs when we recognize what nonprofessionals are currently doing. The medical corpsmen in the Navy and Marine Corps

are performing—and generally very well—various services for which, if they were in civilian life, they would be arrested since they would be practising medicine without a license. It is largely the reluctance of professionals to bend that is the obstacle rather than the limited potentials of the less educated.

The practicability of restructuring jobs is found not only in the professional service field. Private enterprise could probably get more of its needed labor (and at high productivity levels) if it restructured jobs so that the less trained could perform at least parts of them. It is important to see that the credentials problem is an issue vital to both the private and public sectors. The national interest of gaining decent employment for the low-educated and the poor must be joined with the private interest of profit.

We should seek to do more than open up new lower types of higher-level jobs in the public, nonprofit and private fields. These new jobs should become channels into the higher-level. For example, some, if not most, of the nonprofessional teacher aides should become full-fledged teachers. New York University is developing one way of doing this. Present plans call for nonprofessionals to get college credit for their previous experience and supervised experience as nonprofessionals. This college course will build on their backgrounds and needs. The objective is to make it possible to have a useful college experience and get a college degree in a relatively short time. With their degrees and experiences, these newly credentialed nonprofessionals should be able to get very good professional jobs.

If many nonprofessionals do not get professional jobs, we may face the likelihood of a largely black nonprofessional occupational category and of a largely white professional category. In the poverty programs today, many if not most of the urban nonprofessionals are Negroes. If they are not upgraded, we may have a new occupational caste system based on race.

The same danger exists in other fields, especially in the private sector. A major aim of restructuring jobs in private and public sectors should be to construct a new route into high-level jobs.

The Role of the Neighborhood Youth Corps

What can the Neighborhood Youth Corps do? I think it can do a great deal in the current situation. Remember that it is probably the largest non-school, federally supported program dealing with youth—with the exception of the social security and welfare programs which provide income maintenance for families. In its age group, probably no non-school program is as large—neither the Job Corps nor the Manpower training programs.

I shall deal first with the out-of-school program and then turn to the in-school programs where the bulk of the NYC youth are. I want to make six points here:

One. Graded experience to somewhere

The aim should be to help youth get into jobs that may go someplace or encourage them to go back to (and to graduate from) school. We should not be satisfied with providing crash summer jobs which do not lead to anything; these jobs are already being stigmatized as "anti-riot" jobs, as hush money to cool off adolescents during the long, hot summer. The effort should be to get jobs for youth which have possibilities of development into better jobs. They should get something out of the job in addition to the pay.

If this does not happen, the Neighborhood Youth Corps will become a gigantic *aging vat*, hopefully preserving youth until they can enter the labor market at an older age when they can presumably get a decent job. I do not have confidence in this approach. Nor is it the best use of scarce funds to neglect developing youth when the opportunity is there. The "training" of the NYC could become a training into oblivion.

Two. Building around the job

The current labor shortage means that the more easily placed disadvantaged youth will get jobs. Those still needing the NYC will have more difficulties in getting into a decent job. They will need special aids to be taken up by employers into better jobs. There may be a greater need for educational remediation, for counseling and medical aid, for effective supervision and the like. In order to break through the credentials trap, we will have to invest more in each of the youth.

Three. A link role

Poor people are faced with a bewildering array of fragmented, hard-to-reach services. There are few agencies which play the broker role for the low-educated youth, helping him to make and continue contact with needed services. The NYC approach should be that a youth who comes to it for help will be helped in a variety of ways rather than shipped off to other agencies without concern for what happens to him. Once an NYC corpsman, a youth should be able to call on the NYC for continuing aid until he gets and can keep a decent job. As of today, nobody stays with a youth until he breaks through the credentials barrier. NYC could play that role.

Four. Highlight issues

We are suffering from the absence of needed programs; some dropout youth re-enter school only to discover that it has not changed in any way to meet their needs. Private enterprise is not sufficiently concerned about its public responsibility to accept and upgrade the uncredentialed; perhaps it needs financial subsidies to increase its responsiveness. The NYC at the community level can highlight the important issues facing our uncredentialed or low-credentialed youth, by helping to develop public awareness of the inadequacies of our present services and practices. *The NYC can have an important public education function.*

Five. Job development

The NYC could have a heavy emphasis on opening up job opportunities for uncredentialed youth. NYC could help employers to learn how to structure jobs so that youth could fill them.

Six. The advocacy role

Our uncredentialed youth need organizations to operate as advocates for them in their community—organizations that will publicize their growth potentials, will inform the community of the barriers that it has set up to their progress, will insist that we move from low job ceilings for these youth to no ceilings. NYC at the local level could play this role.

What NYC can do will obviously differ from community to community. But NYC can see that these various roles are effectively filled in the community. All of these activities are essential to the mission of NYC to give low-income youth a better chance of a non-poverty life. Since NYC funds are inadequate to deal with all the problems that need to be dealt with, the local NYC agency must learn to work with other organizations to see that youth are served.

We have had a great deal of activity at the national level, mobilizing enormous energies. Now, we need more and more efforts at the local level which initiate new actions, innovate and provide direction for new kinds of programs and activities which will be more effectively oriented to the problems of youth.

In-School Programs

Let me turn now to the in-school programs which have the greatest numbers of NYC youth. These programs have been criticized because in many communities they have succumbed to the natural tendency to "cream." Creaming refers to the process of working with the non-disadvantaged (or the least disadvantaged) of a disadvantaged population. The "cream" of a population get the service rather than those who need it most. Martin Rein and I have concluded that unless there is a deliberate policy against creaming—a conscious effort to get to the most disadvantaged—then creaming will almost always occur.

The mission of the NYC, especially today with the labor shortage, is to help the most disadvantaged. An in-school NYC job (or a summer job) should not be a reward to the already successful but a boost up to the unsuccessful. Schools consequently should conscientiously make sure that the NYC is benefiting those who most need it. We should look upon the in-school program as an educational subsidy program to help poor youth move ahead educationally.

This objective requires that at least some in-school jobs be jobs to somewhere. The jobs should be effective, useful experiences in order to make the job a valuable opportunity for youth. The job experience might be important enough to provide a new credential.

Our aim should not be just to reward a relatively few poor youth but to change the educational climate, expectations and hopes in low-income communities. In focusing on the need for community mobility rather than individual mobility, we should begin to think about new kinds of ways of involving the community in programs. This might, for example, mean that in some communities at least low-income residents have some voice in who gets assigned the in-school jobs which support youth. This might mean that the PTA or families in the area elect representatives who, in conjunction with the school authorities, make decisions about which youth get what kind of jobs. The effort here is to involve the family in school; but even more important than that, the community may become involved in thinking about education in new ways with new possibilities today. The end result is that youth may move much further educationally in a community where the climate is much more positive and hopeful about the schools than is frequently true in low-income communities today in America.

Conclusion

With the great labor shortage that we now face, we have an important chance to raise issues about the processes of exclusion in American Society. We are making efforts to try to improve the situation of many poor people in our society. Our task would be much easier if the credential systems operated with less ferocity, determination, and scope than they now do.

Our concern should be to spot the potentiality of talent in all and to martial resources to develop it. This view contrasts with reliance upon education as the effective and final sifter of the potentialities of people with the consequent conscious withdrawal of concern for the development of those who have not done well in today's educational establishments.

At a time of labor shortage we cannot ignore those who have poorly managed the educational systems. We should not harness ourselves to only one way of social mobility in the complex, extraordinarily swiftly changing society that is the contemporary United States. Our society is becoming a victim of education and credentialism, as well as a beneficiary.

The Neighborhood Youth Corps is only one component of the poverty efforts in our society today. But it can be an effective instrument for social policy concerns if it highlights the issues of credentialism and training, if it forces us to recognize that there are many new kinds of activities which are needed and possible today. We need the will, but we also need the light that you can provide.

The World of the Youth We Serve/Address by

Kenneth E. Marshall,

Executive Director, Paterson Task Force for Community Action
Paterson, New Jersey

I welcome, indeed, the opportunity to address a group of key officials of the Neighborhood Youth Corps. Since we live in and are products of a success oriented society, it is obviously a privilege to be in association with a successful enterprise. The Neighborhood Youth Corps program is clearly a growth oriented industry. If what I read in the New York Times is to be believed, it will be advancing from an operating budget of 259 million for fiscal '66, to a budget of 563 million, or more than double that amount, for fiscal '67. Apparently, your own chief directors did not fully realize your growth potential, since they asked Congress for only 354 million, or some 209 million less than the Congress, at least the lower house of that august body, seems desirous of allocating to the Neighborhood Youth Corps program. As a director of a Community Action Program, I am indeed impressed, particularly since that 209 million is apparently to come out of the pot of the "walking around community action money" that some members of the Congress believe has been put to no good use. The director of the Neighborhood Youth Corps in my city, Mr. Eric Sewell, often speaks of the necessity of a "functional marriage" between Neighborhood Youth Corps and the Community Action agency. The fact is that we have been quite close, even to the point of occupying the same suite of offices. We have been equal partners, although, to this point, Community Action has perhaps been more equal than Neighborhood Youth Corps in Paterson, having a larger budget and a lion's share of our offices and other facilities. All this is now apparently to be reversed, and, of late, I find myself increasingly respectful of my Neighborhood Youth Corps Director.

The Congress, according to representative Gibbons, is interested in "more action and less friction." Congressman Karey asserts that the Congress will be supporting "things that have worked." Obviously, the Neighborhood Youth Corps is considered to be one of the things that has worked and, obviously, I have every reason to be happy to be in association with you.

I take it that you are gathered here in convention in the City of St. Louis, not to rest on your laurels but, rather, seriously to consider means whereby the programs of the Neighborhood Youth Corps can be improved and can be made to match more closely the needs of the young people you are serving. I have been asked, in this speech, to talk with you awhile about these young people. Specifically, I have been asked to discuss the community that surrounds the Neighborhood Youth Corps enrollee, the forces that confront him, the attitudes of local institutions toward him, the values he learns, the resentments he builds up and the needs he takes with him to Neighborhood Youth Corps and other anti-poverty programs.

Before I talk about these young people though, I think it is important to warn against a certain fallacy. This fallacy has it that on the one hand there is a plentitude of worthwhile jobs and, on the other hand, there is a mass of presently "unemployable" young people incapable of getting and successfully keeping these jobs. These young persons are considered to be unemployable because of certain traits and attitudes. For example, they tend to respond in a surly manner to bosses and supervisors; they show up at the job inappropriately dressed; they have a limited conception of time, and, therefore, resist the idea of having to punch a time clock every morning at nine. In short, it is argued, these young people are lacking in motivation and a proper orientation to the world of work. According to this thesis, the "work experience situations" to which these youth should be exposed need not necessarily involve training in a specific skill or any remedial education programs. Rather, through sheer exposure and involvements in an ordered work situation, accompanied, perhaps, by a measure of "counselling", it is believed that these youth can be rendered employable.

The critics of this thesis correctly point out that the so called unemployable young person is a relatively recent phenomenon, as is the necessity for courses in grooming and proper work attitudes. In earlier and less complex days, the great majority of young people we would now label "drop-outs", easily found a place in the work world without the benefits of preparatory programs—and yet, can it be denied that as many of them as of the present crop, were products of fatherless homes, or of law-less slum neighborhoods?

When I was a Street Gang Worker for the New York Youth Board, I had many opportunities to remark the rather startling and abrupt transition from a life of street thuggery, to one of gainful employment. Many an erstwhile be-bop transformed over night into a steady and sober working man. Those were the days, of course, not too long ago, around 1953, when the unemployment rate for non-white youths was 7.2%, rather than the 25.3% it is today. In those days, the average gang buster knew that he could get a job whenever he was really ready. Indeed, many saw no need even of subjecting themselves to any special procedures for obtaining said job; and I recall one young man who had me to know, after sitting around for a couple of days in a youth vocational counselling and placement agency, that he appreciated the efforts of the counsellors in trying to find him a job especially suited to his talents, but nonetheless, he was not returning to this agency because he had no interest in involving himself in a process which he labelled "working to work".

It would appear, then, that the volume of "unemployable" young people varies inversely with the number of practical job opportunities available to this population. In other words, we become increasingly concerned with the unsavory traits and attitudes of unemployed youth, the more rapidly the jobs young people of this caliber used to fill are disappearing. What is new in the situation is that the jobs that young people possessed of these traits and attitudes used to find, are rapidly disappearing, and no amount of counselling or re-orientation is going to qualify these youth for the new jobs, if this is unaccompanied by explicit training in concrete and marketable skills and extensive remedial education.

We would need, then, be concerned about these unfortunate traits and attitudes only to the extent that it can be demonstrated that they block or impede the training or educational process. To the extent that we are content in our programs, with providing mere work experiences and counselling, without substantial training and education, are we deluding ourselves as to the impact and usefulness of our program. This is especially true, it seems to me, of programs for out-of-school young people. In many instances, no doubt, the small stipend an in-school enrollee receives for performing a number of chores not especially geared toward training him or helping him learn anything, is sufficient justification for the program if during his school day he is being taught something of value. For the out-of-school youth, on the other hand, there is obviously no justification for placing him in work situations in which he is acquiring no marketable skill or learning anything of worth. This would be true even if it could be demonstrated that these work experiences were helping him to acquire a whole cluster of refined work attitudes.

I am sure you know of the kind of dead end work assignments to which I refer and the only justification for which has been the "work experience" "employability skills" thesis. I am thinking for example, of assignments as janitorial aides, or as maintenance aides when this really means sweeping and mopping. I know of an instance when a potential work supervisor, pressed to come up with some ideas for Neighborhood Youth Corps job slots, suggested that City Hall elevators be deautomated so that enrollees might be assigned to run them. I don't think that any amount of after-job counselling could convince any other than a very dim-witted young person that he or she was thus being prepared to enter the world of work, a world increasingly characterized by automated procedures not requiring human efforts.

Let us begin our brief exploration of the world of the youth we serve by considering some of the implications of growing up in a rapidly automating world and somehow not acquiring the necessary skills and traits to be truly a participant in what Eric Erickson has called the "technological identity of today." The alienated stances which many of our young people adopt as "hustlers" or other types of street hipsters is merely a mask, I believe, for a profound sense of incompetence to cope with a world in which they really have no place. It takes more than a short-term program of "work experience" coupled with perhaps earnest efforts at counselling, to eradicate this pervasive feeling of incompetence. This is not to say, of course, that many young people will not make use of the dubious opportunity to participate in such a program. I know of young men in Harlem, for example, who occasionally pool their modest Neighborhood Youth Corps stipends to purchase marijuana in bulk which they repackage and retail at high profit. Their dream, I gather, is to reach the "take off" point, fiscally speaking that is when they can give up altogether their Neighborhood Youth Corps jobs and live comfortably on their profits.

One thing that can be said about the various or "sub-cultural" patterns that alienated young people adopt is that, while they last, they are rather complete styles of life which are not going to be shattered by piece-meal or mis-focused efforts at rehabilitation. These efforts, rather, are more likely to be absorbed into the sub-cultural perspectives; as when, for example, it becomes a mark of status in the eyes of one's gang buddies to have survived a term at a tough reform school. Some of us know that in the mocking stare of an enrollee idling at some make-work assignment, is the assertion that we are both "playing the game", although he may also be grudgingly conceding that I, as director, am operating at a higher level of the hustle than he is.

The hustler's basic attitude is, simply, if I can't be a real part of the system, then, let me try to beat it. Let me subvert it to my uses. That is not how he puts it, of course; he says, "let me be slick" let me "run a game on these squares . . ." His role models are not the sober and plodding men "pulling a slave" in some factory, one of whom might be his father but, rather, the successful pimps, drug dealers, gamblers observed sitting behind the wheel of the Cadillac on the corner, or idling in a fashionable bar. Successful hustlers drive automobiles as flashy as their clothes and their women are chosen from among the most attractive of the sporting crowd. They have "connections," and need have no fear of being "busted" by the police.

To aspire to a successful hustler's life is, of course, to subscribe to an illusion, since for everyone who "makes it", there are dozens who fail. But still, to observe a young man pushing a hand truck in the garment center of New York, bits of lint stuck to his slick processed hair, and his pointed, thin-soled Florsheims' taking a beating on the pavement, is to realize that some part of the illusion remains intact in the most adverse circumstances.

On Saturday night, this young man, spruced up, his shoes shined to a high gloss, and with money in his pocket, will be indistinguishable from those few who really make it on the hustling scene. On Saturday night, the illusion becomes real again. Since this young man will long since have mastered all of the outward mannerisms of suave assurance and of mastery of his slick world, it would be difficult indeed, for the casual observer to fathom his profound sense of incompetence in the real world downtown where he is merely a truck boy.

Our Saturday night sharpie is a product of ghetto slum schools. Tests of the reading levels of his third grade classmates would have shown a fairly normal curve of distribution skewed slightly toward the under-achieving side. By the sixth grade, the right hand side of the bell shape curve would have disappeared altogether as well as part of the left side, meaning, of course, that the highest scorer in the class was almost two years below grade level and all the others were below him. Tests in the seventh and eighth grades would have shown no perceptible changes in absolute scores *indicating that learning to read ceased* for all practical purposes somewhere around the fifth or sixth grade. Our young man and his classmates had, somehow, become increasingly culturally deprived and hence increasingly uneducatable the longer they remained in school. By the time he was passed on to junior high school, he knew that it didn't really make much difference whether he dropped out or plodded on to the end to receive a meaningless diploma. He would know that there were dropouts and vocational high school graduates working side by side at the auto-wash cross town.

A pervasive sense of inferiority and of apartness would have been part of the consciousness of our Saturday night hipster since early childhood when it first dawned on him that he was in fact growing up in a rat-infested world, dingy and separate from the world of most other Americans as revealed to him daily on television and in magazines. In his world the cop on the beat and those cruising in squad cars would appear less as protectors than as jailors and exploiters; some petty, scooping up and pocketing dimes and quarters from a hallway crap game, and others, regularly collecting their share from the local numbers banker, not so petty.

In places like Harlem or the Bedford Stuyvesant district of Brooklyn, New York, where more than half the children grow up in fatherless homes, our young man might have long since ceased to remember his father's features or the sound of his father's voice. His careworn mother would have long served, in effect, the roles of both mother and father. Social scientists claim, with some evidence, to observe several defects of character in youth from fatherless homes; including, a deficient sense of workmanship, an inability to postpone gratification, what might be called the "pimp syndrome" or seeking the easy life through the exploitation of women and other weaker persons, etc.

Other than his fatherless home, his peer group, or gang would have been the major shaping influence of our young man. Such institutions as the church and the settlement house would have been of relatively minor influence in his life. The preacher to him, in the words of one 17-year-old Harlemite, is "just another con-man", raking in his Sunday collection. The earnest young social worker, just another square who really "doesn't know what's happening."

But the hipster knows what's happening only in a delimited and circumscribed world, a world largely sustained by illusions. the fantasy of the invincible prowess of his gang or, perhaps, the youthful drug peddler's dream of achieving the status and affluence of a "dealer" commanding a squad of peddlers by next year. In confrontation with the real world of automated factories and college degrees, with its impersonal demands for tangible skills rather than style, with its smooth-talking personnel interviewers and cool receptionists, our young hustler cannot avoid the devastating sense of his inferiority and incompetence.

As a nationwide operation on the way to becoming a billion dollar institution, the Neighborhood Youth Corps faces the challenge of transforming uneducated, frightened and inadequate young people from the world just sketched, into persons competent to take their place in a demanding and achievement oriented society. I see evidence that you, as the key directors of this organization, know that this is not going to be accomplished by a short-term "work experience" and a few hours each week of counselling. You know, of course, that some people have been rather cynical about the Neighborhood Youth Corps and the six months of work experience it provided before turning youngsters back out onto the streets. For one, it has been seen as a device to obscure the true facts of youth unemployment, which, in a society of unprecedented affluence, are truly a disgrace. For another, it has seemed to some people to be an outmoded strategem based on a kind of Calvinist thesis about the character building efficacy of sheer work experience. Frankly, in preparation for this talk, I reread the section of the Economic Opportunity Act authorizing the establishment of Neighborhood Youth Corps, fully expecting to find in its language justification of this latter criticism. Instead, I found a document permitting creative interpretation indeed. Recall the first paragraph, the "Statement of Purpose":

> *The purpose of this part is to provide useful work experience opportunities for unemployed young men and women, through participation in State and community work-training programs, so that their employability may be increased or their education resumed or continued and so that public agencies and private non-profit organizations (other than political parties) will be enabled to carry out programs which will permit or contribute to an undertaking or service in the public interest that would not otherwise be provided, or will contribute to the conservation and development of natural resources and recreation areas.*

In my own city of Paterson and elsewhere in the country, we are only beginning to exploit the possibilities suggested by this paragraph, a statement remarkable for the fact that it envisions benefits both to the individual enrollees in the programs and to the organizations providing the work experience. I think that in the first two years of this program, we have stressed the benefits to the enrollee without having become fully aware of how greatly these benefits could be expanded had we been equally as concerned about the agencies, and, particularly, about the new types of private non-profit organizations which could begin to reshape the world of the youth we serve.

But before going into that, let me say first that I agree with Mike Harrington when he notes, in reviewing the garden variety Manpower programs, that "There have also been tentative steps in a much more daring direction: creating meaningful jobs that fit the people as they now exist." Harrington goes on to state the following:

> *It has been discovered that uneducated, but intelligent people, can perform socially important tasks such as being teacher's aides, social work aides, and research assistants (a gang leader has better access to slum data than a middle class graduate student).*

In Harlem, we found that selected juvenile offenders, graduates of a treatment center practicing group therapy, were quite effective as peer group discussion leaders. The discussions they led were recorded in community center club rooms or a gang boy's apartment. They were monitored and given direction and focus by a trained adult therapist who conferred several times each week with the discussion leader but who never saw the other youths. These discussions were not much different in content from those conducted in person by the adult therapist. These findings led us to design a new type of institution for youthful offenders, a Junior Academy, which would be a neighborhood residence where the bulk of the work involved in running the Academy, including group counselling, would be the responsibility of older young people, some of whom themselves would have been former delinquents. We coined the horrible term, "client-worker" to describe a role wherein such persons as our former delinquents would willingly undergo a course of training for their job as youth counsellors or peer-guided discussion leaders containing the same therapeutic content that they would probably mightily resist were they labelled "clients" in need of "treatment" or counselling.

I believe that now that the Neighborhood Youth Corps will be enrolling young people up to the age of 25 and will be permitting them to remain in the Corps for as long as two years, there is no reason why this organization cannot come to the forefront in training for what are now being called the human services. Everyone is in agreement that if we are serious about waging a real war on poverty that many new service workers, from Head Start aides to Cadet Corps leaders, will have to be recruited and trained. I believe also that the Neighborhood Youth Corps can now take the lead in the development of a wide variety of mutual-aid non-profit organizations ranging from junior academies and the poor boys' Prep Schools, the New York City Youth Board, to Coffee Shop Cultural Centers and Youth Camps. These latter, conceivably could be income producing and could thus raise a portion of the local share.

There is a very important reason why these organizations are needed. Namely, they could become the nuclear cluster of a locally owned and controlled infrastructure of social and cultural organizations which is now so sorely lacking in the world of our deprived young people.

In our study of Harlem, we found a pervasive sense of powerlessness. One man told an interviewer, "A lot of times when I'm working, I become as despondent as hell and I feel like crying. I'm not a man, none of us are men! I don't own anything. I'm not a man enough to own a store, none of us are."

In places like Harlem, not only are the commercial enterprises almost wholly owned and controlled by outsiders, but so too are a majority of the social and cultural agencies. Someone "downtown" decides how many Harlem children go to camp every summer, or the type and variety of activities at the "Y" or church sponsored community center. The Neighborhood residents are viewed primarily as recipients of charities and services some of which are appropriate and relevant to their needs and some of which are not. In this dependent condition, many residents adopt attitudes we label apathy or indifference. The programs and mutual-aid non-profit corporations I am suggesting would be organized and sponsored in such manner as to imbue their participants and sponsors, who would be mainly poor persons, with a true sense of ownership and control for the simple fact that they would indeed own and control.

Neighborhood Youth Corps supported mutual-aid organizations, could also serve as vehicles for the realistic involvement of the more affluent elements of the non-white groups, Negroes, Puerto Ricans, Mexico-Americans and Indians. I think that members of the Negro middle class particularly, are earnestly groping for a realistic and, shall we say, palatable way of joining in sustained efforts to better the lot of their down-trodden brothers. On the other hand, I believe that the latter are awaiting greater and more sustained support and leadership from the affluent and educated members of their group.

A word, finally, on the uses of arts and cultural programs. At a recent conference in Washington, I saw a very good film produced by a Neighborhood Youth Corps group working out of the Union Settlement House in East Harlem. There are people now seeking to draw a false dichotomy between what they call meat and potatoes programs and "frills" or fun and games programs. These people are forgetting the biblical injunction that man does not live by bread alone, but also by the "word." Our technological, acquisitive, commodity oriented society tends to ignore the "word." Here, we leave the elaboration of the "word" into expressive styles of life to those who don't have the "meat and potatoes," bebops, holy rollers, muslims, beatniks, etc. But I think that an analysis of the uses to which arts and cultural media are put by certain southern colleges for the successful education and further socialization of Negro young people from poor environments and from rural areas, suggest analogous uses in northern and western cities for young people, many of whom are no different in ethnicity or geographical background. Lacking many technical resources for formal training, these southern institutions have creatively exploited the arts and art experiences in drama, the dance, etc., as well as courses in ethnic heritage, in developing the motivation, poise, and improved self-image which are the often overlooked concomitants, or, indeed, pre-requisites for successful formal education. In this sense, the art experience is seen as enhancing the possibility of developing engineers, homemakers, scientists and social workers out of individuals from severely deprived situations.

Our Out-of-School Neighborhood Youth Corps program in the City of Paterson, New Jersey, under the creative leadership of its Director, Eric Sewell, is now a laboratory for the ideas we have sketched out this morning. Eric will be eager, I am sure, to tell you of the Neighborhood Youth Corps Leadership Council, the Neighborhood Youth Corps Passaic River beautification and conservation project, as well as his proposed Coffee Shop Cultural Center, Steel Band and other cultural activities, the police cadet corps, business training center, etc.

I am persuaded that the Neighborhood Youth Corps programs in Paterson and elsewhere, are moving rapidly beyond the mere provision of a work experience and traditional counselling, to programs and projects which totally engage the youth we serve; and which, therefore, serve more adequately to prepare them for a useful life in society.

We in Community Action salute you and look forward to strengthening the bonds of our functional marriage!

Neighborhood Youth Corps Goals and Policies in the Year Ahead / Address by

Mark Battle

Deputy Administrator, Neighborhood Youth Corps

Greetings and congratulations on behalf of a grateful nation. In order to discuss Neighborhood Youth Corps goals and policies in the future, it is necessary at least to note the past and make explicit the present. Thus all of us will have a common frame of reference. It occurs to me that your achievement during the first year applauded last night by the Secretary of Labor, W. Willard Wirtz, bears repeating.

You helped stem the tide of the negative impact of poverty for over 500,000 youth and their families in 50 states, Puerto Rico and the Virgin Islands. That's no mean achievement. Let's pat each other on the back for that much of a job well done.

What were the limits, the goals, the policies, under which you operated in the past and which continue to constrain and guide your and our efforts in the present?

One

The goals of the Economic Opportunity Act, Title IB, clearly limit us and you to serving youth aged 16 through 21 from families whose basic income is insufficient to meet their basic needs.

Our Eligibility Standard No. 1-65 revised provides the specific policy guidelines for that.

Two

The act sets up the goals of assisting these youth with maintaining school attendance, resuming school, or increasing employability.

Thus your efforts have been directed by program design to three kinds of programs—an in-school effort, an out-of-school effort and a summer effort.

Three

The third major specific goal of the Act is that of providing needed community service and work in the community interest, including conservation which is not now being done.

Thus our policy requires the sponsor to assure us that the work to be done is in fact a needed service in the community interest and does not impair existing contracts, and that current or planned efforts are maintained. In short, we have insisted and continue to insist that the program neither be distorted into a cheap labor supply nor a make-work, leaf-raking operation.

Four

This program, like all federal programs, is subject to the Civil Rights Act of 1964 and especially the requirements of Title VI.

Our philosophy and policy, therefore, is one of complete compliance with the letter and the spirit of the Act. Thus, we fully expect all of our sponsors to operate a program which is in fact thoroughly representative of equal opportunity in a positive sense.

Five

There are at least five things about the way we operate which you should know, if you are not now fully aware of them.

a/All sponsors have been and are expected to maintain the kind of records of their operations which will permit us to assure the nation and the General Accounting Office that the tax money which supports the program is being spent wisely.

b/Each sponsor has been and is required to report at least monthly on his progress both in fiscal affairs and program activity.

c/Our field staff is required to visit your operation periodically to monitor it for contract compliance. You know, as we do, that our staff has been too small to do this job completely in the past. Fortunately, you have been dedicated to the task you accepted. Despite our inability so far to monitor regularly, we have reason to believe that relatively few contract violations have existed. Certainly, relatively few have plagued us.

d/Our national staff contains a unit charged with evaluating a significant sample of the programs in operation for the purposes of providing analyzed experience as a device for further program refinement, for identification of trends in the national effort, and for investigating especially disturbing problems in the program. Thus, your experience, your successes, your problems become the basis on which the Neighborhood Youth Corps in the year ahead will be built.

You and we now have one and one-half years of experience, and we have extracted a great deal of information from your efforts. Enough of that information has been analyzed to provide us with at least the following concerns, goals, and directions for the coming year. With your permission, I will state the concern and present the goal or direction as an objective to be realized.

> e/Our national staff also includes a division charged with planning and technical development. This unit has convened several "think" institutes on phases of program development like counseling, work supervision, and basic education. In addition, they relate all of the various data available and convert it into planning guides for things like national program budgeting and projecting national allocation of funds. The technical "aids" and program guides produced by this division are also reflective of your studied experience. One of the specific results of this effort will be research and demonstration projects around specific program questions.

As you might expect, we are concerned that the jobs which youth perform be made more meaningful to the youth. The objective here is quite simple. We would hope that the jobs can be so engineered as to contain a specified training component which can be transmitted by the work supervisor and learned by the enrollees. Such components should be related at least to entry jobs which offer career possibilities.

Secondly, we are concerned with the nature, the quality, and the quantity of work supervision. We hope the future will reveal programs in which the work supervisor is carefully selected both for his skills in doing his job (for that part of his example must be transmitted consciously) and for his commitment to helping open new opportunities for youth who haven't had them before (because that part of his example will come through whether it is conscious or not).

In this connection there are a number of related check points for the sponsor to use in evaluating his current effort.

One

Have you clearly specified the role and function of the work supervisor so that you and he are clearly aware of what you expect of him?

Two

Have you designed a program of orientation for work supervisors aimed at helping them become a real party to this human resources development effort?

Three

Have you designed in-service training programs directed at improving the performance of work supervisors in understanding and aiding enrollees, in learning the techniques of supervision, and in solving problems?

To the extent that work continues to be the primary context for assisting our enrollees—and to the extent that the work supervisor continues to be the prime mover within that context—then we and you must deepen our involvement in helping them become efficient and effective.

We are concerned with the limited remediation and re-orientation services actually available in programs currently. Our objective will be to insist that there be specific plans made for delivering the necessary remedial and re-orientation services, be they basic education, counseling, legal, health or family conflict resolution services. We acknowledge that this may involve higher unit costs for the program. We also insist that it include greater involvement of other local community resources on a planned basis.

We are concerned that the concept of equal opportunity be given full life in the program. Thus, our objective would be the establishment of an affirmative program which begins with the development of the plans for the project, shows up as an integral part of every phase of the operation (including the sponsor staff), and results in a change in the pattern of employment of youth in the community where that pattern has, in fact, presented a contradiction in the past. We prefer not to have to use Title VI of the Civil Rights Act as a negative enforcement tool but rather to regard it as simply the law of the land and to develop imaginative, effective, and positive methods of achieving that age-old American tradition—acceptance of the dignity and personal worth of all human beings expressed through real equal opportunity. Each regional office thus will have an equal opportunity officer and an equal opportunity program. We will be watching both carefully.

Perhaps our most pressing concern has to do with the functions of this program as a vehicle for job development, job creation, and job placement.

In this connection we see as a vital and integral part of the planning for this program (a) the serious examination of the existing employment arena with an eye to the re-engineering of jobs at the entry level; (b) deliberate attention to the effectiveness and the processes of the job placement services of the community; and (c) imaginative involvement translating the total impact of the program into job creation activity. This whole set of activity may well project each community into a kind of manpower utilization activity, a change initially difficult and perhaps painful to some. However, the result may well be not only a successful NYC program but also lower welfare costs, lower unemployment rates, healthier inter-group relations and a healthier, more dynamic economy where poverty is increasingly diminished.

These concerns, these goals, these objectives of the Neighborhood Youth Corps constitute some of what we hope you will explore for the remainder of this conference—and further when you return to your local community.

In the beginning, that is in the fall of 1964, we referred to this program as being lean. We set modest goals and we achieved most of them. Now we choose to change the lean image to a more precise one. We invite you to join us in making the Neighborhood Youth Corps an effective, basic instrument for manpower development and utilization in the emerging Great Society.

The Neighborhood Youth Corps we know today actually stands on tomorrow's threshold. We invite you to cross with us.

The Ideal and the Possible / Address by

Robert Schrank

Director, Urban Youth Work Corps, Mobilization for Youth
New York City.

When I was asked to speak about the ideal and the possible in the Neighborhood Youth Corps, it occurred to me that the ideal situation would be one in which we had no need for a NYC or a war on poverty. For the most affluent society in the world to be continuously haunted by a million young people out of work and out of school, is a terrible enigma. That this enigma bothers us to the extent that we are taking arms against it, is to our credit.

Out-of-work and out-of-school youth have been tagged as social dynamite, wolf packs, delinquents, rioters, sociopaths, and just plain useless. The purpose of these characterizations may well have been to shock us into action. As a nation we tend to respond to social problems out of crisis rather than to act out of commitment. This is unfortunate since social problems get caught in the web of invidious slogans. The slogans are designed to scare us into action. If this is what we need to move us, I have no quarrel with it. What troubles me is that we tend to carry into the action program the stereotype slogans we used to justify the program before the taxpayers. Let me give you an example—

From time to time I have requested of various institutions, private and public in our City that they give us work slots for NYC trainees. The first question usually is:

"Who are these kids, dropouts, delinquents, or trouble makers? What do we want them around here for?" Then with the hackles standing straight up, politely, I explain, "Oh no—these are really nice kids, we want to give them a chance to have a work learning experience, please." The trainees are placed. Then you come back in a few weeks and ask,

> *"How are things going?"*

Most often the reply I have received has been,

> *"These kids sure are a lot better than I expected. They really are nice kids."*

You stand there and wonder what on earth he expected? Someone with two heads and an arsenal of guns and knives strapped on his waist?

I have been working with disadvantaged youth now for a number of years. During this time one of the most telling experiences I have had repeatedly is the invidious way that people re-act to the trainees we work with, without ever having knowingly seen or spoken to them. One can't help but wonder, how much of this stereotyping is responsible for the behavior patterns of these young people?

> *"How much self-fulfilling prophecy is at work here?" How much have we sold ourselves on the "social dynamite" syndrome? Who are the youth in NYC and why are they there?*

This is an important question since I maintain that the way it is answered has operating implications for program administrations and staff.

I am sure you have all the statistical information about the NYC. They tell us some things about these young people.

They have one over-riding characteristic in common and that is their experience with poverty. This may be the only thing they have in common. I say this because I try to resist generalizations, especially at a national conference. I am sure even the poverty we talk about varies from one part of the country to another. The young people in the NYC are the same and yet are as different, within their economic group, as any other group with a common economic background. It would be useful to keep in mind the tremendous individual variations within the general grouping.

One of the most positive aspects of the war on poverty is the definition of poverty as a social problem. This is quite a change from seeing poor people as individual failures. Many of the people I mentioned, who see our trainees as nothing but misfits, are still tied to the old definition of the problem—namely, to be poor means, you, poor George Smith, have failed, due to your lack of resources or ego strengths. We could say, "pull up your bootstraps, George Smith." Seing poverty as a social, and not an individual failure means, we, the American society, have failed George Smith. This is a most critical distinction. One demands adjustment from the individual. The other demands adjustment from our social and economic institution.

* * * * *

In speaking of the ideal and the possible in the NYC I wish to make it crystal clear that my assumptions are based on the concept that *poverty,* and its whole supermarket of miseries, is *a social problem and is not individual failure*. What follows from this definition of the problem? What follows is a need to influence our institutions to accept responsibility within their areas for their piece of the problem and work toward its solution. The institutions I have in mind are the schools, organizations concerned with health, and welfare, government local, city and state, and the employers. Through our efforts in the NYC, it may be possible to demonstrate what society can do for disadvantaged youth, even if we only demonstrate this on a small scale.

Now to an Ideal NYC

An ideal NYC should be a sort of finishing school for poor kids. I never attended a finishing school, have never even been in one, but I gather that upper-class kids go there to get finished. Obviously there is something that middle class kids didn't get in their homes and schools—in spite of affluence. So they have to be finished. I would guess that what is learned in these finishing schools are the necessary tools for making it in the Junior League, and how not to be a slob at a coming out party. Well, these are the necessities of the upper class. Hence the finishing school teaches them what is expected.

It is my contention that NYC trainees are also in need of some finishing to equip them with the necessities to make it in society. Unfortunately for many of the NYC trainees, the things they need to finish them are so numerous it becomes a logistics problem to accomplish it all in a short stay in the NYC. My NYC finishing school for the poor will require a number of departments, because as I indicated, there is a wide range of talent in the NYC, aside from the basic in-school, out-of-school, rural and urban differences.

While there is some questioning in sociology about the changing nature of work in our society and the possibility that we are approaching a non-work culture, (I am a willing candidate for the non-work experiment) in the meantime it remains fundamental to man's relation to society that he be employed. The kind of job is a key to your position in the society. It is for this reason that everyone coming into the NYC ought to be confident of employment when he comes out. Not any old job, but one related to the area of interest that he has been working in either in-school or out. The job ought to have decent working conditions and a decent wage. Many of us who have been operating youth work programs over the years have disagreed on many things except one. A work, or work-study program to develop a head of motivational steam, must have a clean-cut commitment for employment at the termination or graduation. We read much about the inability of the poor to delay gratification. Mostly it appears to me that to delay gratification one must be able to afford it. One needs reserves, assets in the bank, some confidence that the outcome will be real and not another fairy-tale about opportunities that turn out to be non-existent. The youth I have observed in our programs show an exceptionally high ability to [illegible] a con job. When they sense the con of "study hard—learn, develop good work habits" that ends up in a sweepers' job or none at all, what is "delaying gratification" bringing them? Just the $37.50 a week—nothing else.

Ideally the first thing we need is a commitment from both the public and private sector to hire our trainees upon completion of training. These commitments would come from topnotch data process, insurance companies, retail stores, airlines, major and minor manufacturers, and all the service outfits, that at the end of X number of weeks or months they will hire X number of our trainees. In many instances, entrance level requirements will have to be set aside. This should cause no sweat since our experience has been that these conditions of employment most often have no relation to the job requirements anyhow.

The jobs that these companies commit to us should be status positions, or at least should clearly lead to the front entrance and not to the back service door.

Ideally these employers who have committed the jobs to us will understand that many of our trainees may need time to get used to the new and often strange atmosphere. Many of our trainees have never been in the rarified atmosphere of a large office, department store, electronics plant, or board room. They may be frightened by some of the goings on or just the newness of the place. At times, when I step back and view the scene of my own place of work, it frightens me too! But this is only because poverty locked these places out of their experience. Our experience has been that given time, trainees from NYC who are slow starters, may become excellent employees.

Ideally employers should keep in close contact with the referring agency. They should let us know how the trainee is doing and should advise us of problems as soon as they arise. We should be able to see trainees on the job, especially if we have a group of them in one company.

Another commitment we should seek from private industry is their help in the design and execution of the training program. Let me suggest that the employers can, and in fact do, train all new entrance-level employees. Sometimes their resistance to training NYC corpsmen may involve discriminatory practices. Ideally we should be able to convince them that these practices are archaic and are going to go sooner or later, so why not sooner. I know you will convince the employer that it's easier to do it voluntarily than to be forced.

Ideally there is another commitment we need that is critical in some areas. This is from the unions. The union members on a job can be very supportive and helpful to a NYC corpsman or they can give him or her a hard time. More important, the union in full support of our program could do a number of things for us. First, together with the company, they should use their muscle in the community to get support for the program. Second, by taking the NYC corpsmen into the union they give him an additional support. In my ideal model they also waive the initiation fee.

As you can begin to see, a key factor for an ideal program is commitment. We need a series of these commitments to develop the power that is needed to make the program work.

Ideally we ought to get a greater number of jobs from the public sector than from the private. I say this only because the public sector,—(up until the recent increase in employment, at any rate) has had a greater increase in the number of new jobs than the private sector of employment.

There are about 60,000 out-of-school youths in NYC programs. All of them could be easily absorbed in the public sector. I would assume, however, that many NYC trainees won't want to work in the public sector. They should be given that choice. There are existing civil service titles which our trainees can handle. Ideally, however, we need some changes in civil service that discriminates against the poor.

What are some of these requirements that are discriminatory? Age, in many instances, acts as a ban to those under 21 or under 18.

School requirements should be removed where they have no specific relation to the job itself.

Many young people, especially in the cities, have had some scrape with the law for standing on the corner or for hitting a ball through a window. We penalize these young people because they grew up in a crowded ghetto and sometimes flew a little too high trying to make life livable and ended up in the arms of a policeman. Talk about double jeopardy, the poor are in endless jeopardy. First they are casually arrested—casually interrogated—casually convicted and then are eternally damned for having a record. Arrest records should not be a bar to employment.

Ideally, training should be permitted on the job whether it be civil service or private. Let me give an example—A number of cities have undertaken police cadet training programs. The assumption is that we need more policemen who represent minority groups. But, the present cadet programs are again screening out the very people who should be in. Number one, if you have a record you're out. Number two, if you don't have a high school diploma you're out. Number three, if you're not 5 foot 8 inches you're out. This takes care of most of the NYC corpsmen in my program.

Ideally what could be done?—Youth who want to be policemen should be permitted to attain that goal by being in training, on the payroll, until they reach 21. What we would do is to use the years from 17 or 18 to 21 to do our finishing school work, or rather complete our unfinished work. This would guarantee that at least a good percentage of minority youth would become policemen.

Aside from rediscovering the poor, the war on poverty has helped us to discover a new manpower resource. This resource has been identified as the non-professional. A whole body of literature on the non-professional has recently grown up. I refer you particularly to the book titled *New Careers for the Poor* by Frank Riesman and Art Pearl. This book outlines the strategy of using non-professionals in a variety of areas in the public employment sector. The first assumption of the need for the non-professional is that we have many needs in our communities that simply are not met.

The second assumption is, that in meeting these needs, there is a place for people without professional training in education, hospitals, nursing homes, parks, playgrounds, employment offices, housing authorities, city, state, and federal government operations.

Ideally we should have our local schools give us a commitment for Teacher Aides. Our experience in a few of our New York schools using Teacher Aides in the lower grades has been rewarding. After a period of intensive training in pre-school orientation, they received assignments in local schools.

Teachers were released from all kinds of petty chores, and could devote more time to actual teaching. Teacher Aides became helpers to students who were failing. Pre-school children found, in our Negro and Puerto Rican Teacher Aides, young people to whom they could easily relate. Some persons have asked, "How can school drop-outs become models for young children?" You have to have seen the changes in these Teacher Aides, to believe it. From so-called unmotivated, indifferent people, they very quickly, (within a month) became involved in learning problems, classroom organization, and most important, their own reading levels jumped 3 to 4 grades in 6 months. Their dress and demeanor changed visibly. They were becoming part of society. As important, the classroom teacher who at first resisted the idea, is now clamoring for aides. Similar experiences could be related in hospitals. Frank Riesman has organized two mental Health clinics in New York which are staffed completely, excepting the director, with nonprofessionals. Many professionals believe that the nonprofessional has qualities of dealing with the poor that many professionals do not have.

I could relate similar experiences in a variety of places with the use of non-professionals. Ideally we need a commitment from our public sector to employ the non-professionals after we have trained them in the NYC.

The NYC Job Slot

I now turn to the NYC job itself. I refer to the place that our trainees are assigned to work.

The objective of the work assignment ought to be clear, especially to the trainee. *Is it just a job to make some money to stay in school?* That's OK. *Is it an opportunity to get a feel of work and what it is about?* That's OK, too.

However, I can not see either of these objectives as leading to much motivation. My number two ideal for the NYC, the first being a job commitment, is that the work assignment be related to the employment commitment. This commitment should be the guide for the content of our finishing school curriculum. Here's how it might work. . . .

We have received a commitment from our county hospital to hire 25 aides in nursing, 12 maintenance helpers, 2 ambulance attendants and 10 clerical workers. The local school wants 15 teacher aides, 2 librarian aides, 2 recreation aides and 2 laboratory assistants. Medicare wants 2 interview aides and 5 home interviewers. Welfare wants 15 homemakers and 10 child care aides.

From industry we have a commitment for 50 auto mechanics, 25 appliance repairmen, 60 salespeople, 20 heavy equipment operators, 32 typists, 12 key punch operators and 10 electrician and plumbers' helpers.

With this job order under our belts and a clear understanding of our objective to train for the job, we can now develop our job slot. Ideally we ought to have a job training slot for each job order. In my model I would want NYC experience to be directly related to the job commitment (or as close to it as I could get). Now what happens? Let's look at—

An Ideal Day in NYC

The supervisor of the job greets the trainee with a warm friendly smile and tells him how glad he is to have his help. He carefully explains the work rules, the time they start, how long coffee breaks last, the time they quit. The supervisor explains to the trainees his work assignments and how he will progress in his work from one level to the next. The trainee should know that while he may start at a low level, he will progress to higher levels.

My ideal work atmosphere is a totally supportive one. Work supervisors should not assume that the trainee ought to know how to behave. The supervisor's job is to show him or her by example and by reinforcing each little or big success with recognition. Recognition is something of which our trainees have had very little. This is a key ingredient for developing a sense of one's place in society. As the training progresses, the corpsman begins to make field trips to his prospective place of employment to familiarize himself with his future job.

* * * * *

Backing up the NYCorpsmen is his counselor. He has been involved with the corpsmen from the day he first appeared for work assignment. His function is to help the trainee to arrive at objectives, whether they be school or work, or both.

For the counselor to be effective he must be informed about what is happening in the work experience. Ideally the counselor should relate directly to the person supervising the trainee. This makes for the beginning of team effort. When problems develop in the work setting, the counselor should be in a position to move in as quickly as possible, discussing the problem with the work supervisor and the trainee. Experience again seems to indicate that if you quickly nip negative situations in the bud, they can be turned around. If not, they tend to run down-hill into another swamp of failure. Our trainees need no more of that!

The counselor and trainee may agree that this is not a good situation for the trainee. If so, he is transferred to another job. We should guard against being impatient with our trainees. Ideally we should never forget that our trainees are adolescents. Because they are poor they should not be denied the right to youth.

Our trainees need to be treated with dignity and not made to feel we are doing them a favor. Dignity means care that things are done efficiently. Often persons responsible for daily operations of Neighborhood Youth Corps Programs may develop a casual attitude toward them. This often results in shoddy practices. While routine matter may have no meaning to professional staff, the trainee reacts to the casualness as an expression of society's indifference towards him.

Let us take the example of paychecks. It is inexcusable for a trainee not to receive his correct pay when he is supposed to. When he is not properly paid he interprets this to mean a lack of regard for him, as someone who has worked and deserves proper compensation for it. Staff members who make appointments with trainees and then keep them waiting are teaching the trainee something. It is called contempt. All it does is breed more of the same. Our trainees have often been taught too much of this already. Let's have no more of it.

My second type of ideal work slot would be crews of 10 trainees under an adult work supervisor. I would want the crews to do work that has as much relevance to employment as my job slot description. If we are doing public works I would prefer it be done by adults. Youth ought to be in programs that have some relevance to their future.

* * * * *

Some people have argued that many NYC trainees have such severe deficiencies that there is not much that we can do with them. We have young people in the NYC who have graduated or have gone to the 10th grade and read and do arithmetic on the 3rd or 4th grade level. Obviously, this is a real handicap for employment. This leads me to my third ideal.

Supportive Services

Individuals in learning situations ought to be healthy. A person who is in pain or whose body is just not functioning normally is not the ideal subject for learning.

Many NYC trainees have severe dental and visual problems. If you can't see, it's for sure, that you will have poor perception. If you are ashamed of your bad teeth, it's hard to learn to smile. If you're anemic or suffering from malnutrition, it's almost impossible to do a day's work. It is for these reasons that our finishing school has to finish the physical needs of our trainees. Local doctors and hospitals should be available to make a check up. More important, we need to be able to correct vision, fix teeth and take care of basic health needs.

Many NYC corpsmen have real deficiencies in basic education. In our society if you can't read, indeed you're unfinished. You're not prepared to take your place as a socially-productive citizen, if you don't have the basic-living tool kit. That kit must include the ability to read, (not necessarily Homer or Shakespeare, although I think that would be just fine) but as a minimum, one ought to be able to read the daily newspapers. One needs some basic arithmetic, if for nothing else than to figure your paycheck or know the odds in the numbers racket.

The failure of many of our young people to learn to read and write is our failure. It is a failure of our educational institutions. As you may remember, a bit earlier I spoke of assumptions regarding the responsibility for social problems as being individual or societal? Here is a good example of the impact of the definition of the problem.

> *"Do we place the responsibility for failing to learn on the Negro youth from the central city ghetto? One could say that they are culturally deprived and had poor self image, therefore, were not prepared for school.*

This is an important question and I find that the way one answers it colors everything in the program.

> *"Who is charged with teaching children in our society?" I would say it is the schools.*

As a matter of fact it is a law that our children go to school. We long ago decided that an educated population was a pre-requisite for a democratic society. It seems to me that the least we can do is hold the schools responsible for the end product. We simply have not paid enough attention to our educational system and now we have to try to compensate for our failure. Dr. Kenneth Clark so aptly stated the problem of the ghetto school, when he said: "The reason these children don't learn is nobody teaches them." Responsibility for a finished product is something our industrial society understands. Maybe we ought to apply quality control and output standard to our school systems.

Recently the Auto industry has been raked over the Congressional coals for turning out unsafe cars. Within two weeks GM, Ford and Chrysler started calling in models for changes. The schools have the responsibility to turn out as finished-product as the auto industry. If kids come out who can't read, can't spell, can't add, then they have not done their job. Maybe a congressional investigation is needed. Unfortunately, with human beings you can't call them back for model changes. Now we have been given the job in the Neighborhood Youth Corps.

Ideally what do we need? First we need a wide range of educational service because our trainees represent a spectrum from low to high in achievement.

Ideally how are we to teach them? There is always the suggestion of sending them back to school. *Why should they be more successful the second time around?* Unless of course there were basic changes in the school system? No; it seems to me that many of the out-of-school youth are just too alienated from the school system. Their learning needs a new setting. I would put it on the job site or as close to it as I could. I would closely relate the curriculum to the work being done as well as to the employment objective. In this way I would hope to have some of the motivational steam from the efforts toward employment directed toward learning.

The learning process should be made into a group objective. It is fairly well accepted that adolescents are peer oriented. This can be very useful in the learning experience. Classes should have a ratio of no more than 15 trainees to one teacher. Ideally the learning situation should draw from our best knowledge of group dynamics, role playing, programmed learning, and teaching machines. Particularly for trainees going into specialized areas, the teaching machine can be used to real advantage. Ideally we will need new curriculum materials for many of the 18- and 19-year-olds who read on a 4th or 5th grade level. It is a terrible indignity to ask a six-feet-two 18-year-old to read: "Jane here comes Spot. See Spot jump. Jane, what is Spot's name?"

If the trainee's work is meaningful and he is getting something out of it, then motivation to learn will be high.

If there is no motivation to work or learn, no interest, it is a symptom that the program is not clicking. Let's start looking at what's wrong. If you end up blaming the trainees you have had it. Then we have made full circle to damning the victim again. Ideally that will never happen.

The last supportive service I want to deal with is the counselor. He is in a most sensitive position. Ideally he should be dedicated to the philosophy that we are dealing with a social problem and not a psychological one. Second, he should be knowledgeable about all possible alternatives for NYC trainees within his area. Third, he should follow the progress of the trainees to be on the lookout for problems. People who have had little or no security are fearful and tend not to see alternatives. The counselor ideally helps the trainee to discover alternatives. Finally, the counselor is a mediator and an expediter in getting through maizes of red tape that so often tend to surround government programs.

Ideally my counselor would have authority to make decisions in conjunction with the trainee, decisions to transfer to another job site, decisions on medical and health needs, decisions on remedial classes, and on individual tutoring.

The Possible

Most of the things that I have described to you as being ideal must become within the reach of every Neighborhood Youth Corps. From my limited knowledge of what has been done around the country, I have seen some innovations that are equal to the ideals which I have presented. For example, the New Jersey Rural Work Corps had no money for teachers, no classroom space (they were out in the woods). What did they come up with? They had the work supervisors given some training by the Board for Fundamental Education. They became the teachers on the worksites. The school buses that were used to transport the trainees became classrooms.

I know of other situations where college students were asked to volunteer as tutors and did excellent work with trainees. Medical schools have been involved in giving physical examinations.

My Midsummer Nights' Dream is no dream at all. If your program does not strive for the ideals of which I have spoken, then I seriously question whether, we are carrying out our responsibilities to the young people of the NYC.

One of the major limitations from which we suffer is a lack of commitment to ideals. Once commited to to these ideals, the program objectives then have a built-in direction. Without ideals, programs tend to become pragmatic, day-to-day operations, with no device for measuring what it is you are doing. Ideals give you something to measure against.

The operation of the program is in your hands. Much of what I have spoken about depends on what you do or don't do. I hope that the ideals I have suggested will prove to be some kind of inspiration to the realization of our responsibilities.

“How the Neighborhood Youth Corps Can Help Change Your Schools” / Address by

Daniel Schreiber

District Superintendent, Board of Education, New York City Schools

“Jimmy — The Dropout Who Returned to School”—a film produced for me while I was Director of the project: School Dropouts—describes the plight of a normal intelligent, healthy young man who leaves school because of failing grades and the need for money. The film was made as a “cinema verite” and for the uninitiated—I was one until I signed the contract—it means that no script is prepared in advance, but instead the camera follows the boy and the story that unfolds describes what actually happened. Let me describe some of the more poignant, heart-rendering and tragic scenes.

After Jimmy dropped out of school, a field worker from CPI visits him in his home—a clean, neat, fairly well furnished home. Jimmy states that he left school because he needs money although his mother says that he doesn't. He has been working as a part-time car washer and the money he earned has gone into clothes. In a verbal encounter with his mother, Jimmy tells her that the reason she wants him to go back to school is that, because she is president of the Parents Association, she doesn't want people to know that her son is a dropout.

In one scene, Jimmy and the field worker are discussing jobs and life in general. Jimmy knows he is in a dead-end job and is dissatisfied with it. In response to a question, he replies, “I'll be working at this a long time.”

“How long is a long time?” he is asked. Jimmy replies, *“a life time.”*

Jimmy finally decides to return to school. CPI sets up a meeting with the school counselor and his teachers. They show a real interest in Jimmy, and he is glad to be back. No change is made in his program, and he struggles valiantly to perform satisfactorily but after 3 weeks, Jimmy drops out again.

The last scene, shown in dead funeral silence—shows Jimmy walking to the time clock at the car washing place. He is going to be there a long time—*a Life Time.*

NYC was not available in that school when the film was made, and I wonder whether it would have made a difference for Jimmy. I doubt whether it would have. The reason for my conclusion is that the school was not making sufficient accommodations in its program to insure Jimmy successful experiences. Love and a kind heart—good as they are—are not enough for the thousands of Jimmies in our school. They need more.

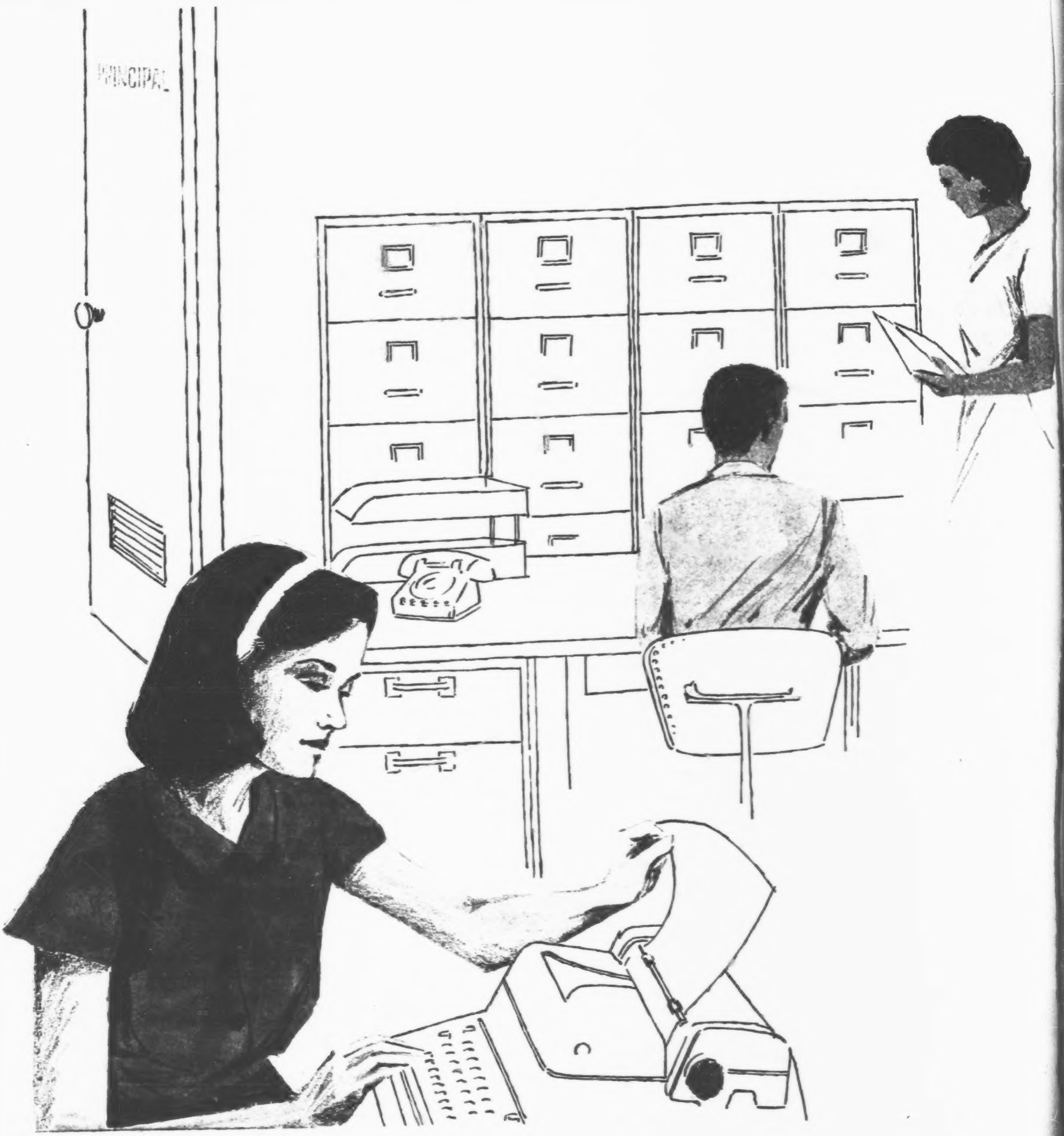
In a way, Jimmy was fortunate. He came from an intact home; his parents loved him; food, clothing and shelter were provided, and he had a place to go when he felt the world was against him. There are many more Jimmies, as you well know, who are less fortunate—angry, defeated, defiant, frustrated young men and women who came from disoriented and disorganized homes. To them a home is a place to sleep; the streets, a place to make a buck; and the bar, a place to forget one's troubles.

Has the $1.25 an hour for 10 hours a week made a difference in the lives of some of these youth?

One school I visited had assigned 8 of the hardest, most difficult youngsters to the Corps. They had histories of truancy, misbehavior, had spent more time in the Dean's office than in classrooms, were known to the police and to the juvenile courts. In fact they were referred to as the *1-2-3 group—1, 2, 3, and out you go.* After 8 months in the program, 5 are still in school. Truancy has lessened, attitudes toward school have been modified, and there has been some slight improvement in academic achievement. If they continue, they will make it out of school but on their terms; not as Jackie Gleason says “away you go.”

What about another 40 youngsters I saw at the same school. They were normal youngsters—I'd say above normal, considering the problems they faced. They needed money desperately. Some were being pressured by their families to quit school and support themselves. Sometimes these constant pressures are direct, “Get a job. I can't support you”; sometimes they are subtle and indirect and for a sensitive boy or girl these are worse. You know the kind I mean. “I wish I could buy you a pair of slacks.” “Gee, I'm so tired.” “We'll need money for the rest this week.” How can a boy ask for pocket money to buy a pack of cigarettes, date a girl, or even buy a book? How can a girl ask for money for hair-spray, for lipstick, for the hundred and one things a girl needs to make herself attractive and pleasing! How can they? They can't and don't.

In this school, the NYC has been a life-saver for these youth. Of the 40, 37 are still in school. Their work has improved; they are participating in the life of the school; they feel they belong—they have a contribution to make—self-respect and dignity have been added to their lives. The counselor predicted that 90 percent



would stay on through graduation and that without an NYC program only half that number would have done so.

One reason for the success of the program is that a new ingredient has been added—"instant counseling." Because the faculty knows that the counselor assigned to the group is vitally interested in them, they notify him immediately if a corpsman shows deviate behavior, begins to fail in his school work, or anyone of a myriad of actions. The counselor sees the young man immediately and an attempt is made to resolve the problem under this system. Problems do not fester and overwhelm both the teacher and the youth.

What kind of work do these men and women do? They work in stock-rooms, distribute books and supplies, dust the shelves in the library, put stamps on out-going mail, answer the telephone, or do simple filing if they are in the commercial course. They do the jobs that school monitors used to do. The kinds of jobs that college preparatory youngsters used to do so that the school would be able to indicate on their transcripts that they had given service to the larger community. This has created a problem in one school. In fact, they reserved service at a local hospital for the college-bound youngsters—no NYC youth are assigned there.

The training the NYC youth receive for these jobs is usually on-the-job training. The teacher or school secretary to whom they are assigned trains the Corpsmen to the degree they think they can be of help to them. Sometimes the training is left to a fellow corpsman. In general, it is haphazard. No pre-service training is provided.

One division in a school system publicly stated that it wanted no more corpsmen assigned to its office because they were disruptive and did not do their work. The office had no one to train and supervise the corpsmen and if it were to assign one of its own staff members to this job then the production of work in the office would suffer. What a sad commentary.

Will the NYC change the schools? It has already and it will do so more as time goes on, but it won't make an appreciable change unless educators are aware of its potential and are willing to innovate.

The fact that more youngsters will remain in school through graduation will mean more teachers, more classrooms, more money. If in New York City, for example, only half of the approximately 30,000 youngsters who drop out of school from a class as it moves through the grades were to remain, at least 500 more teachers would be needed, and 5 more schools would have to be built. Both of these items would cost at least 40 million dollars and this does not include books, supplies and transportation. And underlying this is the acute shortage of teachers.

Would it compel schools to introduce large group teaching, team teaching, programmed instruction at a much faster rate than they are doing now? Would it compel educators to look at teacher-aides, school aides? If it did, and Frank Riesman and Arthur Pearl believe that it will, then are we opening career and job opportunities for some of the NYC youth.

Recently, for the pre-kindergarten classes in the district I supervise, a family assistant and two teacher aides were assigned for each class. The family assistant, who receives $100 a week, will function as a subprofessional to the school social worker and guidance counselor. This type of employment for NYC youth could hold the possibility of their becoming professionals in the field.

Recently, I had the occasion to visit someone in a hospital. A young woman, with the letters R.P.N. stamped on her name card, came in to take the blood pressure of the person I was visiting. When she finished I asked her what R.P.N. stood for. Proudly, she replied that she was a registered practical nurse and that she had had to pass a state certifying examination in order to get that "R" in front of the P.N. The schools could assign NYC youth to hospitals and hopefully some of them will move from P.N. to R.P.N. to R.N. and a Bachelor of Science in Nursing.

Another way in which NYC will effect the schools will be to make them aware (and the guidance counselors especially) of the increased opportunities for higher education that exist for NYC youth. Many colleges today are offering poverty youth a money package—work-study, scholarship, financial assistance and a loan. Some youngsters are taking advantage of the package but many more should. The schools will have to inform such youth of these opportunities not at the senior high school level but at the junior high school level; or better still at the elementary level. Parents will have to be informed. New goals will have to be outlined. The relationship between the parents and the school will have to be changed, and it's all for the good.

I have stressed pre-service orientation and training of the Corpsmen, enlarged guidance services, graduate supervision. Yet because all of this costs money, and because many school systems are badly strapped for money because of tight budgets, these activities do not take place. But they should and must. The NYC budget must provide them.

Programs such as NYC will change the schools of America and help them accomplish their commitment to all of the children who cross their threshold: The opportunity to become a meaningful, participating dignified person who has a worthwhile contribution to make to society and his fellow man.

"How NYC Can Help Change Hiring Policies and Jobs" / Address by

William Landis

Manager, Technical Education, Chrysler Institute

Member, Manpower Advisory Committee, U.S. Department of Labor

I, personally, am very happy to have been invited to talk to you about the development of our Nation's youth. We, at Chrysler, sponsor and support many Youth Development Programs for we feel that the backbone of our country takes form, develops and strengthens through the proper guidance and training of our young children and our young adults who are so well represented in NYC.

We know through accounts of its accomplishments that the Neighborhood Youth Corps has done many wonderful things in the area of youth development and guidance—and, for this, our country grows stronger.

I have been asked to direct my remarks today toward *"How Neighborhood Youth Corps Can Help Change Hiring Policies and Jobs."* On this subject, I can only relate to you my Company's experiences and achievements with jobs and people.

When we speak of jobs and people, we are automatically talking employment. This, then, is basically the process of paying someone to perform a task to accomplish an end product or service.

The KEY words in my topic title are: CHANGE HIRING POLICIES AND JOBS. I hesitate to confess this to you, but when I read the subject title, I was lost . . . and, to this moment, I'm not sure that what I am going to say is what you want to hear.

It has always been my understanding that the job set the standards as to hiring requirements; that the job was created first—*before* the applicant was hired; that the job dictated the qualification requirements of the applicant; that the job was not developed or changed to meet the qualifications of the applicant, but vice versa.

A *JOB* usually evolves from an idea, a change in a method of manufacture, or a new service demanded by society. Each job places the burden of qualifications on the applicant desiring to perform the task. A case in point is the Neighborhood Youth Corps: a demand evolved that someone do something about the unemployed, unprepared and unqualified youth of our country. The job was there, and the Neighborhood Youth Corps was developed as a service organization of qualified citizens to work toward correcting this situation.

HIRING POLICIES, and here I again refer to my company, are based on the job to be filled. We all agree, I am sure, that it is only good business to hire a qualified person for each available job opening. Some of the main factors considered when seeking applicants for a given job are:

- Physical condition of the applicant.
- Knowledge of the job or similar work (past work experience, including NYC work projects).
- Indications of learning potential.
- Aptitude toward the type of work involved.

Our hiring policy, then, is to hire the best qualified person for the job opening. You are, no doubt, saying to yourselves right now, "He said job knowledge is a factor considered in hiring people, but how do these youngsters obtain job knowledge before they are permitted to do the type of work involved in a job?"

Let me attempt to answer your question by first setting down the following facts:

One

Through technological change in most phases of industry, new jobs have evolved; some jobs have become obsolete; the character of manufacturing methods has become highly technical and less manual in many areas.

Two

Entry jobs have become fewer due to change in manufacturing methods.

Three

Employees (because of more liberal retirement benefits) are retiring earlier than in the past, thus creating shortages of workers in certain areas.

Four

Older employees, in many areas, have become under-employed due to technical advancements in their line of work.

Five

Qualified workers are difficult to find and, in many areas (*skilled and highly technical*), cannot be found at all.

Six

I am told high school dropouts are increasing.

JOHN E. JONES
PERSONNEL DIRECTOR

Seven

A surprising number of people looking for employment are totally unprepared to accept even entry jobs or jobs requiring training after hiring because of a lack in their basic education.

Eight

The employment situation is expected to become much worse before it shows signs of recovery.

These statements automatically prescribe the changes we must make to cure our society's ailment of under-employed, unprepared people.

In the past few years, the bond between public education, industry, labor and government has become stronger and more meaningful. These agencies have lined up to tackle the job at hand—that of providing basic education and job training to our citizens.

Let me take a few minutes of your time to relate some of our experiences in working in these programs:

As you can see, these programs divide themselves into four (4) basic types:

a/Pre-Employment Training (Institutional).

b/Pre-Employment Training and On-the-Job Training (Combination).

c/On-the-Job Training.

d/On-the-Job Training and Institutional Training (Combination).

It is highly important to note, here, that ALL of these courses require adequate, *Basic* education *Prior* to being accepted on the program. By BASIC education, I mean *Reading, Writing and Arithmetic. EVERY* applicant must possess this fundamental knowledge to qualify for further training after their formal education has ended. They must have the capacity to think and reason with some degree of logic, and to communicate both orally and in writing with at least some measure of success. Given people with these basic skills, industry can develop and train them for the jobs at hand.

What I am saying can best be shown by this example: The other day, we were asked to evaluate the curriculum of a Pre-Apprenticeship Training Program. It was found that the trainees spent 33% of their course time in the classroom studying shop math, blueprint reading, and shop theory; 67% of their course time was spent in the school shop learning how to operate Tool Room machine tools. To my way of thinking, these percentages should be reversed.

The purpose of a Pre-Apprenticeship Training Course is to prepare people to qualify for apprenticeships. We, in industry, will provide the training on the machines and the related classroom training for the trade. I have here our *Apprenticeship Related Training Curriculums* for all trades at our company, for those who would like to see the weight of the courses required in apprenticeship these days.

Let's take excerpts from the Related Training Curriculum of the *Die Maker* Apprentice, for example. Among other courses, he is required to take the following at our local Community College:

—Shop Arithmetic

—Algebra

—Geometry

—Trigonometry 1, 2, 3

—Logarithms

—Slide Rule

—Compound Angles 1, 2,

—Gearing

—Descriptive Geometry 1, 2, 3, 4

What I am saying is this: It takes a basically qualified applicant to step into these courses—and to be successful.

In cooperation with our local State Employment Service, we tested practically all of their applicants for apprenticeships and accepted those who qualified. We continually do cooperative testing with the Michigan Employment Security Commission for other Training Programs sponsored by Chrysler Corporation.

Finally, I would like to go on record as offering our services in assisting in the development of Pre-Employment course curriculi, Pre-Apprenticeship course curriculi, or in any other way in which we are qualified to be of help.

Incidentally, we currently have apprenticeship openings for 768 Auto Mechanic Apprentices throughout the country, but have difficulty in filling them. If you know of some young men who would be interested in this training, Bob Granakis has my address.

THANK YOU.

PROGRAM

United States Department of Labor
Neighborhood Youth Corps

"NYC: Prescription for Change"

The Hon. A. J. Cervantes, (right), Mayor of St. Louis, Mo., presents Secretary of Labor, W. Willard Wirtz with a proclamation signaling Neighborhood Youth Corps week in St. Louis.

First National Conference • St. Louis, Missouri • May 2, 3 and 4, 1966

Monday, May 2, 1966

Registration and Information
Technical Consultations
Banquet Session

Welcome—*Honorable A. J. Cervantes, Mayor of St. Louis*

Keynote Speaker—*Honorable W. Willard Wirtz, Secretary of Labor*

Guest Speaker—*S. M. Miller, Visiting Professor of Education and Sociology, New York University*

Neighborhood Youth Corps Enrollee Talent Presentations
Presiding—*Jack Howard, Administrator, Neighborhood Youth Corps, Conference Chairman*

Tuesday, May 3, 1966

General Session

"The World of the Youth We Serve"
Kenneth Marshall, Executive Director, Paterson Task Force for Community Action, Paterson, New Jersey

"Goals and Policies Ahead"
Mark Battle, Deputy Administrator, Neighborhood Youth Corps

"Some Reactions"—*a panel discussion*

Moderator—
Raphel O. Lewis, Executive Director, Community Action for Youth, Inc., Cleveland, Ohio

Panelists—
Cyril Tyson, Executive Director, United Community Corporation, Newark, New Jersey
Gilbert David White, NYC Enrollee, Baltimore, Maryland
Jack White, Sponsor, East St. Louis NYC Project, East St. Louis, Illinois
Oliver Terriberry, Sponsor, Georgia Mountains Planning Development Commission, Gainesville, Georgia

Presiding—
Jack Howard, Administrator, Neighborhood Youth Corps, Conference Chairman

Luncheon Session

"Neighborhood Youth Corps Programs: The Ideal and the Possible"
Robert Shrank, Director, Urban Work Corps, Mobilization for Youth, New York City

Presiding—
I. Jack Fasteau, Program Coordinator, Department of Health, Education and Welfare, Washington, D. C.

Afternoon Session

Discussion Groups

Evening Session

Film Presentations

"A Change is Gonna Come"—*Written, produced, and directed by NYC enrollees, Union Settlement Association, East Harlem, New York*

"NYC Enrollees at Work"—*Tampa, Florida TV Series*

"Stay in School"—*Film, Courtesy Pepsi-Cola Co.*

"Investment in Tomorrow"—*U.S. Army Film*

Wednesday, May 4, 1966

Morning Session

"The Dilemmas and Politics of Coordination"—*a panel discussion*

Moderator—

Martin Rein, Presiding Associate Professor, Department of Social Work and Social Research, Bryn Mawr College

Panelists—

Curt Aller, Director, Office of Manpower, Policy, Evaluation and Research, Manpower Administration, U.S. Department of Labor, Washington, D. C.
Erwin France, Director, Youth Opportunity Center, Chicago, Illinois
Sam Samples, Director of Counseling in Residence, Breckinridge Job Corps Center, Morganville, Ky.
Roslyn Kane, Manpower Specialist, Community Action Program, Office of Economic Opportunity
Marion Thorpe, Director, Office of Field Operations, Neighborhood Youth Corps

Sponsor Discussion Groups

"What We Want from NYC"—*enrollee discussion groups*

Luncheon Session

"How NYC Can Help Change Schools"
Daniel Schreiber, District Superintendent, Board of Education, New York City Schools

"How NYC Can Help Change Hiring Policies and Jobs"
William Landis, Manager, Technical Education, Chrysler Institute

Presiding—
James Higgins, Regional Staff Chairman, U.S. Dept. of Labor, Kansas City, Missouri

Afternoon Session

"Prescription for Change"—*a panel discussion*

Moderator—
Eli E. Cohen, Executive Secretary, National Committee on Employment for Youth

Panelists—
Nathan Glassman, Manager, Training Staff, Linde Division, Union Carbide Corporation
Rev. John W. Yanta, Project Director, San Antonio, Texas
Rodney Gibson, NYC Enrollee, Schenectady, New York
George Wiley, Director, Poverty Rights Action Committee, Washington, D. C.

"The Changes We Need"
Enrollee report presented by Sally Aylsworth, NYC Enrollee, Wichita, Kansas

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Neighborhood Youth Corps Planning Committee:

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GPO : 1966 O - 234-999

VT 002 297
Brooking, Walter J.
The Development and Use of an Instrumentation Technology Curriculum Guide. Preprint No. 7.5-1-64.

Instrument Society of America, Pittsburgh, Pa.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 64 10p.

*CURRICULUM DESIGN; *CURRICULUM DEVELOPMENT; *INSTRUMENTATION TECHNICIANS; TECHNICAL EDUCATION; POST SECONDARY EDUCATION; OCCUPATIONAL INFORMATION; PROGRAM CONTENT; *COURSE DESCRIPTIONS

Programs to educate technicians must provide (1) knowledge of applied science and of the associated hardware, processes, systems concepts, procedures, techniques, materials, and modern measuring and control devices, and (2) ability to communicate with the engineer or professional scientist doing research, development, production, or scientific work. The Instrument Society of America signed a contract with the U.S. Office of Education to develop this type of program into a 2-year post high school curriculum guide for training highly skilled instrumentation technicians. The two main problems in the construction of a valid curriculum guide for these technicians were to define in detail what the technician must do; then to design a series of courses which would give students the needed knowledges, attitudes, and competencies. These problems were met by obtaining information through questionnaires and personal visits. A tentative outline was written and distributed to 102 schools, 45 industries, and 21 other organizations for their review. A final draft was further reviewed by 14 technical institutes and junior colleges. This review resulted in a curriculum guide which is outlined here. The guide is published with the title, "Instrumentation Technology, a Suggested 2-year Post High School Curriculum," OE-80033 (VT 002 516 in AIM Fall 1967). (HC)

VT002 297

ED033 237

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10pp

PREPRINT INSTRUMENT SOCIETY of AMERICA
19th Annual ISA Conference and Exhibit • October 12-15, 1964, New York
Preprint Number 7.5-1-64

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THE DEVELOPMENT AND USE OF AN INSTRUMENTATION TECHNOLOGY CURRICULUM GUIDE

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The highly skilled technician is becoming an increasingly essential part of the scientific and management team in modern research, development, production, and services. The team is composed of scientists, engineers, specially trained technicians, supervisors, and skilled production or laboratory workers. The ratio of technicians to scientists or engineers, at present, is usually less than 1 to 1, but the trend seems to be toward 2 or more to each engineer or scientist. The increasing need for technicians in all phases of industry and research employing modern instrumentation and systems control continues to be apparent.

The explosion of new scientific knowledge has caused changes in scientific and engineering education, so that the recently graduated professional scientist or engineer often has had little laboratory experience and functions more as a theoretical scientist than was the case in the past. Thus, there is a vacuum developing in the area of applied laboratory knowledge formerly exercised by the scientist or engineer, and which presently is being filled by an increasing number of highly trained technicians.

Because qualified and competent technicians are produced by a process directed specifically toward the objective of educating for special employment functions, the U.S. Office of Education's Technical Education Branch has developed "suggested curriculum guides" which serve as plans or blueprints for educational administrators, department heads, instructors, interested employers, and others, as they establish programs to educate technicians in various areas of applied science. Instrumentation and systems control is one of these areas.

Programs to educate technicians must provide a carefully structured, rigorous study of scientific principles and supporting mathematics in an area of applied science plus an intensive laboratory-oriented program of instruction. This type of program is required to provide (1) knowledge of applied science and of the associated hardware, processes, systems concepts, procedures, techniques, materials, and modern measuring and control devices, and (2) ability to communicate with the engineer or professional scientist doing research, development, production, or scientific service work and to be his delegate and assistant.

Prior to the development of a curriculum for training highly skilled technicians, there must be the recognition of a need for these essential members of the modern scientific research and production team. Until there is a well-defined and generally recognized need for highly skilled technicians in a particular area of scientific or technical work, there is neither the incentive to develop curriculums for technician training programs in educational institutions nor is there a definition of the duties to be performed by such personnel.

THE ISA'S INTEREST IN TECHNICIANS FOR INSTRUMENTATION

It is significant that the organized effort of the Instrument Society of America, as the leading scientific and technical society operative in the field of instrumentation and systems control, took the initiative six years ago by formally investigating the problem of preparing adequately trained technical personnel for the industry.

The importance attached by the Instrument Society of America to this matter was illustrated by the activities of the affiliate organization, the Foundation for Instrumentation Education and Research, which, in 1958, compiled a list of schools organized by instrumentation manufacturers, and began promoting the study of using technicians as supporting technical personnel for the scientists and engineers in the field.

In 1959 a task force to define technicians and their function was established, and in 1960, after careful study, a report was made by the task force. This report defined and recognized the need for specially educated instrumentation technicians to serve the rapidly expanding industry.

These initial efforts, extending over two years by the Instrument Society of America, provided the initial groundwork for continued study, and a growing awareness on the part of both the active members of the society and the industry of the need for encouraging the training of instrumentation technicians.

VT 02297

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TECHNICAL EDUCATION AND THE U.S. OFFICE OF EDUCATION

Simultaneous with the Instrument Society of America's concern about the need for highly skilled instrumentation technicians, in 1958 the National Defense Education Act was passed by the United States Congress for the purpose of training highly skilled technicians necessary for defense.

This Act provided Federal funds, matched dollar for dollar by the States, for the purchase of what sometimes can be expensive laboratory equipment for training highly skilled technicians, for teacher's salaries, and for purchasing materials and providing other services for this type of education. Since 1958, enrollments of full-time students in technical education programs, most of them post high school, grew from fewer than 20,000 to more than 75,000 in 1963. In 1958 some 260 schools provided education of this type for highly skilled technicians under Title VIII, and the number had grown to over 700 by 1963. Many of the new schools have been built primarily to train technicians and other skilled personnel.

In 1962, representatives of the Instrument Society of America and the Technical Education Branch of the U.S. Office of Education began discussing the need for instrumentation technicians, as defined by the Instrument Society of America. The growing need for such specialized personnel in industry generally, in missile systems development and control, and in the space program clearly indicated a need for expanding the number and capability of programs for educating instrumentation technicians.

This resulted in the U.S. Office of Education undertaking development of a 2-year post high school curriculum guide for training highly skilled technicians. In view of the interest and capability of the Instrument Society of America's educational organization, a contract was written with the Instrument Society of America as the contractor, under which it would produce the initial draft of a curriculum guide for training highly skilled instrumentation technicians.

WORK BY THE ISA UNDER THEIR CONTRACT WITH THE U.S. OFFICE OF EDUCATION

The two main problems in the construction of a valid curriculum for training highly skilled instrumentation technicians were to define in detail what the technicians must do, and then to design a series of courses which would give students the knowledge, skills, attitudes, and competencies they must acquire to perform and meet job responsibilities as employees.

There were already programs in existence for educating several kinds of technicians whose work bore some relation to that of instrumentation technicians. Therefore, a reasonable approach to constructing the curriculum guide was to search out all pertinent and available information concerning courses, necessary facilities and duration of training which were already being given in one form or another in educating technical personnel in the field.

In order to accomplish the task, the Instrument Society of America employed Austin Fribance, Professor of Mechanical Engineering at Rochester Institute of Technology, as chief researcher and author for the writing of the curriculum guide. Professor Fribance worked with Emil Minnar, the Manager of Technical Education Operations in the ISA, who served as the project manager for the contract. Together they were an effective and well-balanced team.

Under the contract, in cooperation with the U.S. Office of Education, a tentative outline of the curriculum guide's content was constructed. There followed a very comprehensive study by Professor Fribance and Emil Minnar of (1) the function of technicians in the instrumentation industry and the common competencies required of technicians in the various industries using instrumentation, and (2) the junior colleges and technical institutes which were then training instrumentation technicians.

In the course of this study, a nationwide survey was conducted, which included the distribution of a preliminary outline and descriptive draft of the curriculum to 102 schools; 45 industries, including among others, space exploration, aircraft, chemicals, petrochemicals, steel making; and 21 other organizations and knowledgeable individuals in the field of instrumentation. A questionnaire was enclosed with the draft of the proposed curriculum guide which was distributed, and the results of the answers to the questionnaires were tabulated and carefully analyzed. The response from the schools, industry, and individuals was a good indication of the extensive and sustained interest in this matter, since response came from a very high percentage of those to whom questionnaires and preliminary drafts of the curriculum guide were sent.

During the spring months of 1963, Professor Fribance and Emil Minnar visited a representative cross section of the schools teaching instrumentation, electronics or mechanical design for technicians, and many of the industries requiring instrumentation technicians as a part of their necessary personnel.

The important firsthand knowledge obtained by the questionnaires and the personal visits provided a basis of authoritative knowledge in evaluating and identifying the required content of a curriculum guide for educating instrumentation technicians. The study allowed the cooperative efforts of the U.S. Office of Education and the Instrument Society of America to proceed in producing the final draft of the curriculum guide.

WHAT INSTRUMENTATION TECHNICIANS CAN DO

The study provided clear evidence that instrumentation technician students can develop many essential competencies in a carefully designed and rigorous 2-year post high school program. What may be expected of them follows:[1]

> Highly skilled instrumentation technicians must be capable of working closely with instrumentation engineers and scientists and also must have the capability to supervise and coordinate the efforts of skilled craftsmen and instrument maintenance men. These capabilities allow technicians to be effective members of the scientific team whose work is to plan, assemble, install, calibrate, evaluate, and operate instrumentation as it is applied to processes or systems.
>
> Because instrumentation technicians are employed in so varied, numerous, and often specialized situations, the adequately trained instrumentation technician must have attained certain abilities, scientific knowledge, and technical skills. These have been broadly defined as follows:
>
> 1. Facility with mathematics; ability to use algebra and trigonometry as tools in the development of ideas that make use of scientific and engineering principles; an understanding of, though not necessarily facility with, higher mathematics through analytical geometry, calculus, and differential equations, according to the requirements of the technology.
> 2. Proficiency in the application of physical science principles, including the basic concepts and laws of physics and chemistry that are pertinent to the individual's field of technology.
> 3. An understanding of the materials and processes commonly used in the technology.
> 4. An extensive knowledge of a field of specialization, with an understanding of the engineering and scientific activities that distinguish the technology of the field. The degree of competency and the depth of understanding should be sufficient to enable the individual to do such work as detail design using established design procedures.
> 5. Communication skills that include the ability to interpret, analyze, and transmit facts and ideas graphically, orally, and in writing.
>
> The instrumentation technician will use the foregoing abilities, knowledge, and skills when employed, in several (but usually not all) of the following general activities:[1]
>
> 1. Applies knowledge of science and mathematics extensively in rendering direct technical assistance to scientists or engineers engaged in scientific research and experimentation.
> 2. Designs, develops, or plans modifications of new products and processes under the supervision of engineering personnel in applied engineering research and experimentation.
> 3. Plans and inspects the installation of complex equipment and control systems.
> 4. Advises and recommends procedures or programs for the maintenance and repair of complex equipment used in extensive control systems.
> 5. Plans production as a member of the management unit responsible for efficient use of manpower, materials, and machines in mass production.
> 6. Advises, plans, and estimates costs as a field representative of a manufacturer or distributor of technical equipment and/or products.
> 7. Is responsible for performance or environmental tests of mechanical hydraulic, pneumatic, electrical, or electronic components or systems and the preparation of appropriate technical reports covering the tests.
> 8. Prepares or interprets engineering drawings and sketches.
> 9. Selects, compiles, and uses technical information from references such as engineering standards, handbooks, and technical digests of research findings.
> 10. Analyzes and interprets information obtained from precision measuring and recording instruments and makes evaluations upon which technical decisions are based.
> 11. Analyzes and diagnoses technical problems that involve independent decisions.
> 12. Deals with a variety of technical problems involving many factors and variables which require an understanding of several technical fields.

Mastery of this curriculum is preparatory to employment as a highly skilled technician in the broad field of instrumentation. Graduates in many cases will be employed as: Instrumentation Technicians; Engineering Aides - Instrumentation; Engineering Associates - Instrumentation; Service Specialist in Instrumentation; Laboratory Technician - Instrumentation; Research Technicians; Electro-Mechanical Technicians; Instrument Field Service Technicians; Laboratory Assistants.

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[1] Division of Vocational Education, U.S. Office of Education. Occupational Criteria and Preparatory Curriculum Patterns in Technical Education Programs. Washington: U.S. Government Printing Office, 1962. (OE-80015) page 5.

THE FINAL WRITING AND VALIDATION OF THE GUIDE

The final contract draft of the curriculum guide was delivered by ISA to the U.S. Office of Education Technical Education Branch in November of 1963. This draft was distributed by the Office of Education to 14 technical institutes and junior colleges who were teaching instrumentation programs for their detailed analysis, review, and criticism. The purpose of this review was to obtain an inventory of the experience of those currently educating instrumentation technicians, in order that their ideas, suggestions, and criticisms could be incorporated into the final draft. This review process resulted in a curriculum guide which contains the most germane and practical suggestions for the presentation of such a program, and insures that the proposal is both feasible and effective.

After the reviews from the schools were received and analyzed, a final conference was called in Washington, D.C., which consisted of 12 industrial users of technicians, eminent educators in the field of technical education, and others knowledgeable about instrumentation. The purpose of the conference was to make a section-by-section and page-by-page review of the final draft of the curriculum guide. After the final review, the agreed upon format and content of the guide were incorporated, and the completed document was prepared for final publication by the Office of Education.

It is now available as a published guide with the title, "Instrumentation Technology - A Suggested 2-Year Post High School Curriculum" - OE-80033, and may be obtained in single copies by writing the Technical Education Branch, Division of Vocational and Technical Education, U.S. Office of Education, Washington, D.C. 20202; or it may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20202.

CONTENT OF THE CURRICULUM GUIDE

As a brief indication of the content of the guide, the table of contents, curriculum outline (Figure 1) and a brief description of each course follow:

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(SEE TABLE 1)

BRIEF DESCRIPTION OF COURSES

First Semester

Physics for Instrumentation I - A study of the basic principles of physics, emphasizing mechanics and heat, with particular emphasis on those principles which are embodied in the design of mechanical indicating and sensing devices.

Mathematics I - A course in algebra, analytic geometry, and introductory trigonometry with particular stress on slopes and rates of change and the determination of maxima and minima conditions as related to instrumentation.

Measuring Principles I (Mechanical) - A study of the more common sensing devices and components which are employed for the measurement of temperature, pressure, flow, and related phenomena. It is designed to coordinate with the material presented in Physics for Instrumentation I.

Communication Skills - A program designed to promote greater competence in reading, writing, talking, and listening.

Instrument Shop Practices - A laboratory course designed to provide practical information on the application of basic theories to commercial instruments; instrument construction, tests and accepted test procedures; and safety precautions which must be observed when working on instruments. This course is presented concurrently with Measuring Principles I (Mechanical).

Second Semester (Optional)

Physics for Instrumentation II - A study of electrical principles, sound, light, magnetic theory, and elementary electronics. This course and Electrical Circuits - AC and DC, which is taught concurrently, form the basis for Measuring Principles II (Electrical), taught in the third semester.

Mathematics II - A course which completes the study of those principles of analytic geometry which are necessary, and concludes with introductory phases of calculus required for optimum performance in instrumentation and control.

Electrical Circuits - AC and DC - A study of the basic laws pertaining to series and parallel circuits, reactance, impedance, and polyphase systems.

Technical Reporting - A study of effective ways of presenting information. The student learns the utility of graphs, drawings, sketches, and outlines for various types of oral and written reports.

Summer Session (Optional)

Studies - To meet special requirements of State or institution.

Chemistry for Instrumentation (Optional) - This course should present the basic and underlying principles of chemistry which are employed in industrial and commercial applications, with particular emphasis on the elementary principles required for instrumental analysis.

Third Semester

Measuring Principles II (Electrical) - A study of basic types of transducers, employing electrical or electronic energy. Photoelectric, potentiometric and position-responsive devices are considered. Data logging and recording devices are also studied.

Electronics I - A study of the elementary electronic principles, components, and devices. This course is preparatory to the study of electronics for instrumentation.

Control Principles and Telemetry - A course in which the process being controlled is considered as a major element in any control system. The effects of resistance, capacitance, and transportation lag or dead time upon a control system are examined. Pneumatic, hydraulic, and electrical controllers are studied and methods for transmitting signals and creating responses at a distance are controlled.

Calibration and Standardization - A laboratory course designed to illustrate the philosophy of measurement and control, emphasizing the meaning of validity, sensitivity of control devices, units of measurement, and levels of accuracy and traceability.

General and Industrial Economics - A study of general economics principles, and an analysis of the factors involved and importance of cost control in an industrial enterprise.

Fourth Semester

Control System Analysis - A study of the response of systems to instrumental control based upon consideration of the system components. Negative and positive feedback along with the implications of closed loop control are covered.

Electronics for Instrumentation - A study of the application of basic electronics principles in devices such as transducers, recorders, analytical instruments, data storage and retrieval apparatus; and consideration of the various means for utilizing frequency as analog of some variable.

Computer Principles and Systems - This course employs virtually all previous courses as it familiarizes the student with both analog and digital computers for measurement, comparison, logging, and control. Numerical control is an integral part of the course.

Instrumentation Project - A laboratory project to promote individual initiative and project responsibility. It involves a review of major concepts in previous courses, since the student has maximum opportunity to develop, evaluate, and carry his project to successful conclusion.

Industrial Organizations and Institutions - A study of the roles played by labor and management in the development of American industry. An analysis is made of forces affecting labor supply, employment, and industrial relations under the democratic system of government.

COMPARISON OF EDUCATION OF INSTRUMENTATION ENGINEERS AND TECHNICIANS

Baccalaureate programs for educating engineers as specialists in instrumentation and process control are not commonly offered. Such programs are complicated by the necessity for providing the student with the essentials of both mechanical and electrical engineering, with a special emphasis on measurement and control. These requirements, together with the trend in recent years for engineers to specialize at the master's or doctor's degree level, make bachelor's degree programs in instrumentation engineering uncommon. One example of such a baccalaureate engineering program is the B.S. degree in Measuring Science offered at the Center for Measurement Science at the George Washington University. Its curriculum content is compared with the curriculum for educating instrumentation technicians in a 2-year post high school program in Figure II.

The primary difference between the two programs is that baccalaureate engineering curriculum extends for four years and is designed to provide the engineering student with a greater depth of understanding of the mathematical, scientific, and engineering theory and principles than is possible to teach the technician in two years of similarly intensive study. This is evident in the comparison shown in Figure II.

Another difference is that the technicians' curriculum is strongly laboratory oriented because of the limitations of time, and the emphasis of techniques, hardware, application of principles, and actual working practice.

(SEE FIGURE II)

SPECIAL CONSIDERATIONS IN EDUCATING TECHNICIANS

The sequence of the courses in a 2-year technical curriculum is as important as the content of the courses. In general, the subject matter in a technical curriculum is carefully correlated in groups of concurrent courses. This is in sharp contrast to the arrangement of professional curriculums in which basic and somewhat unrelated courses make up the first part of the study program and specialization is deferred to subsequent terms.

In technical curriculums, such as this instrumentation technician educating program, it is essential that specialized instrumentation (technical) course work be introduced in the first term. Deferring this introduction even for one term imposes serious limitations on the effectiveness of the total curriculum. Several important advantages accrue from the early introduction of the technical specialty; 1) student interest is stimulated and maintained by practical aspects of studying instrumentation and if the first term consists entirely of general subjects - mathematics, English, social studies - students often lose interest; 2) by introducing technical study (instrumentation) in the first term it is possible to obtain greater depths of penetration in the instrumentation subjects in the latter stages of the 2-year program; and 3) there is maximum practice in the application of mathematics in the technical courses. The student's study in mathematics is reinforced by his appreciation of the disciplinary values obtained therefrom and the need for these values in the study of physics, and the increasingly interdependent courses in instrumentation and control which follow.

The laboratories and equipment for teaching instrumentation technicians must meet high standards of quality, since the objective as well as the strength of the program lie in providing valid laboratory experience basic in nature, broad in variety, and intensive in practical experience. Well-equipped laboratories with sufficient facilities for all students to actually do the laboratory work are required for these courses. In the education of technicians, competency obtained by doing is required.

Variety and quality of equipment and facilities are more important than quantity in equipping laboratories for teaching instrumentation technicians. Such equipment and facilities are a major element of the cost of such a program.

THE USE OF THE INSTRUMENTATION CURRICULUM GUIDE

The curriculum guide which has been developed and is now available is a tool designed to assist educational administrators and all other persons interested in establishing programs to educate highly skilled instrumentation technicians. Like any other tool, its value lies only in the extent to which it is used effectively.

This guide will be distributed to all of the State Directors for Vocational Education in the nation, in a sufficient quantity that it may be provided to school administrators and department heads and instructors in institutions which are, or should be, contemplating the training of instrumentation technicians; and therefore establishing a program for such training. It can also provide suggestions for improving existing programs, or for providing courses designed to upgrade and update the knowledge and skills of employed personnel in the field of instrumentation.

In view of the origin of this particular guide, and the highly sustained interest on the part of the Instrument Society of America, this curriculum guide can be a means by which ISA members can knowledgeably assist the educational leaders in their communities to establish or improve programs for training instrumentation technicians.

The final effectiveness of the Instrument Society of America's contribution to the curriculum guide's development will be realized to the degree that local ISA education committees or industries assist schools in implementing training programs. The program outlined in the curriculum guide doubtless will be modified in some cases to emphasize the content specific to the peculiar needs of the area.

The assistance which local industrial persons and members of ISA can give to the educational institutions can be described as follows:

1. Get acquainted with the local educational institutions, their facilities, personnel, and leadership, and make known the requirements of local industry for highly skilled instrumentation technicians.
2. Assist in surveys and define the present and projected need for new highly skilled technicians to be trained in full-time preparatory programs, and in programs for updating and upgrading the personnel already in the local industries.
3. Serve on advisory committees on curriculum content, the equipment needed, and objectives to be served by a program for educating highly skilled technicians. It is here that the curriculum guide can form a common ground of suggested information of what is practicable and required regarding course content, facilities, and teaching staff for high quality instruction of instrumentation technicians.
4. Assist in obtaining, developing, and retaining qualified teachers for local technical education programs; and assist in encouraging those teachers to maintain up-to-date technical competency, enthusiasm, and active involvement with the local employers in the field. Active participation by teachers in local ISA activities should be encouraged as one means of accomplishing these objectives.
5. Assist in leading school personnel, parents, students, and guidance personnel to an understanding of the opportunities that a career as a highly skilled instrumentation technician offers to young people; and encourage public support of the local educational institutions for such a program.
6. Provide, if possible, a cooperative work experience for promising young students who are studying to be instrumentation technicians perhaps by summer work, or if possible, by cooperative educational programs.
7. Encourage the school administrators, department heads, instructors, and students involved in an instrumentation technology program to actively participate in the meetings and activities of the local ISA sections. This will be a means of keeping them in contact with the technical advances in the field of instrumentation and with the local industry.

IMPLICATIONS FOR THE FUTURE

In recognition of the growing importance of education for highly skilled technicians, Congress, in the Vocational Education Act of 1963, makes permanent the provisions of Title VIII of the National Defense Education Act for training highly skilled technicians. The new Act also provides substantially increased funds for vocational and technical education for greater numbers of people of all ages.

The instrumentation and control industry has an increasingly important stake in vocational and technical schools because of the greater Federal, State, and local funds which such schools receive. In light of this, it seems likely that the more that local ISA educational committees work cooperatively with the local schools, the better will the interests of both be served. The best programs for educating highly skilled technicians are those which utilize employers' advice and counsel in the establishment of good laboratories, competent teaching staffs, and the development of strong and functional programs which serve industry's needs. Such programs will probably continue to grow in number and vigor. Interested industrialists, such as ISA members, will doubtless provide the leadership required to direct program growth toward the ever higher standards of excellence required by modern technological practice. One important long-range result of such industrial assistance will probably be a greater use of local schools for industry-related training, with an ultimate reduction in total cost of company employee training.

Much of this new development in vocational and technical education will be at the post secondary level. The trend seems to be toward providing more people with vocational and technical education immediately prior to their entry into initial employment. The legal employable age and the maturity of the individual are factors that exert influence toward about two years of post secondary education.

The instrumentation technology curriculum guide was cooperatively developed by industry and educators. Its full utilization now depends on its cooperative use by industrial leaders and the vocational and technical educators in each locality where instrumentation technicians are needed.

Figure 1

TWO-YEAR POST HIGH SCHOOL CURRICULUM FOR EDUCATING INSTRUMENTATION TECHNICIANS

Courses	Class Hours 1/	Lab. Hours 1/	Outside Study	Total Hours
First Semester				
Physics for Instrumentation I	3	4	6	13
Mathematics I	5	0	10	15
Measuring Principles I (Mechanical)	3	6	6	15
Communication Skills	3	0	6	9
Instrument Shop Practices	0	4	0	4
	14	14	28	56
Second Semester				
Physics for Instrumentation II	3	4	6	13
Mathematics II	4	0	8	12
Electrical Circuits - AC and DC	3	6	6	15
Technical Reporting	3	6	6	15
	13	16	26	55
Summer Session (Optional)				
Studies to meet special requirements of State or institution				
Chemistry for Instrumentation (Optional)				
Third Semester				
Measuring Principles II (Electrical)	3	6	6	15
Electronics I	3	6	6	15
Control Principles and Telemetry	3	4	6	13
Calibration and Standardization	0	3	0	3
General and Industrial Economics	3	0	6	9
	12	19	24	55
Fourth Semester				
Control Systems Analysis	4	4	8	16
Electronics for Instrumentation	3	3	6	12
Computer Principles and Systems	3	2	6	11
Instrumentation Project	1	6	0	7
Industrial Organization and Institutions	3	0	6	9
	14	15	26	55

1/ Class or Laboratory hours per week for a 16-week semester.

Figure II

COMPARISON OF 4-YEAR ENGINEERING BACCALAUREATE PROGRAMS IN MEASURING SCIENCE[1] AND 2-YEAR CURRICULUM FOR INSTRUMENTATION TECHNICIANS

Subject	4-Year Baccalaureate Engineering in Measurement Science		2-Year Curriculum for Instrumentation Technicians	
	Semester Hours		Semester Hours	
	Class	Lab.	Class	Lab.
Engineering				
General	13	6		
Mechanical	13	6	3	10
Electrical	13	6	9	15
Measurement and Instrumentation	14	41	14	25
Physics	10	15	6	8
Chemistry	4	8	0	
Mathematics	18		9	
Communications & Graphics	4	5	6	6
Humanities or Social Sciences	14		6	
TOTAL	103	87	53	64

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[1] At the Center for Measurement Science, School of Engineering, The George Washington University. The Center was established by the University in 1960 with the collaboration of the National Bureau of Standards and the financial support of a grant from the Martin Company, Baltimore, Maryland.

VT 002 375
Kneeland, Natalie
Distributive Education--A Guide to Practical Research. Vocational Division Bulletin, no. 301, Distributive Education Series, no. 33.

Office of Education, Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
OE-82011
Pub Date - 63 47p.

*DISTRIBUTIVE EDUCATION; *EDUCATIONAL RESEARCH; *RESEARCH OPPORTUNITIES; RESEARCH CRITERIA; *RESEARCH METHODOLOGY; RESEARCH SKILLS; *PROGRAM GUIDES

The purpose of this document is to serve as a guide for the beginner in practical research and as a refresher manual for the experienced researcher. Major units cover; (1) Considering Practical Research (what it is, why do it, who should do it, when and where should it be done), (2) Answering Questions (undertaking research, finding suitable problems, starting, and proceeding), (3) Following Procedures (planning, collecting information, processing information, putting findings to work, evaluating results), (4) Handling Statistical Data (ethical use of statistics, use correct measurements of central tendency, take reliability and variability into account, set up comprehensible tables, show insight in interpreting data), (5) Writing the Reports (create interest, achieve clarity, conform to good writing, use words intelligibly, prepare an acceptable manuscript), (6) Using Visual Aids (determine what to use, prepare visual aids, use visual aids effectively), and (7) Do's and Don'ts lists for practical research. (MM)

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OE-82011

Vocational Division Bulletin No. 301

Distributive Education Series No. 33

DISTRIBUTIVE EDUCATION

a guide to practical research

by

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT 023375

Superintendent of Documents Catalog No. FS 5.282:82011

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1963

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C., 20402 - Price 20 cents

Foreword

CHANGES in operational practices, personnel qualifications, and career opportunities in distribution point to the fact that those in distributive education must recognize and accept responsibility for practical research as a necessary part of their jobs. Gathering data on, and finding solutions to, everyday problems in the classroom and in the marketplace have been identified as practical research. These and other research activities should be accelerated if distributive education is to move ahead in training people for careers in distribution. In the report of a 1961 national conference on distributive education research, leaders in this field acknowledged that simple criteria are needed to help distributive education personnel maintain acceptable standards in their research activities.

This publication is designed for the beginner in practical research who needs a handbook. It should be equally useful as a refresher manual for the experienced researcher, and as a working primer for those who see research not as an area reserved for experimentalists and experts, but as a practical way of looking at and dealing with their own job activities. Its format is such that it should increase interest in doing research and provide study topics for workshops and meetings.

Natalie Kneeland, formerly research consultant with the Retail Research Bureau, University of Pittsburgh, and with the School of Distribution, Richmond Professional Institute of the College of William and Mary, planned the bulletin and prepared the manuscript. Review and editorial assistance were provided in the Distributive Education Branch, under the direction of John A. Beaumont, Director.

WALTER M. ARNOLD,
Assistant Commissioner for
Vocational and Technical Education.

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I. Considering Practical Research

What is practical research?

Practical research in distributive education is the study or investigation of factors essential for satisfactory performance in the field of distribution. Involved are three essentials: The presence of a problem in need of solution, an organized procedure in attacking the problem, and application of findings.

Pure research, on the other hand, may be undertaken merely out of intellectual curiosity rather than need, while the results may or may not be applied. It operates in the realm of theory, rather than practice, although its findings may be applied by others.

Practical research operates within a time limit. Unless solutions are found to everyday problems quickly, they may become acute and costly. For this reason, two types of research are needed:

Short-term projects, to which quick solution may be found. These will be in the majority, and are usually informal in character.

Long-term studies, broader in scope, which take a longer period to complete. These will be limited in number.

Practical research in distributive education falls into three categories:

Factual information, dealing with figures and statistical data, activities, methods, procedures, policies, and physical factors.

Training, concerned with content, teaching methods, and evaluation.

Motivation, dealing with opinions and preferences, selling and advertising, public relations and supervision.

Why do practical research?

Research has a threefold purpose: *to discover*, *to develop*, and *to verify*. How does this apply in distributive education?

Discovery

The changing nature of distribution makes continuous discovery of new wants, procedures, policies, physical facilities, and training needs imperative.

Development

Further development of practices already in operation is a constant challenge: Courses need revision; operations require simplification or elaboration; policies demand translation into written form; new ideas need implementation. Investigation of special problems requires research in depth as well as in breadth.

Verification

Getting the facts on which to make decisions is a must in distribution; conjecture is not enough. Surveys play an important role in practical research, and procedures and training materials are tried out. Various evaluation techniques are employed to answer the question "How am I doing?"

When and where should research be carried on?

When?

Practical research is a continuous process, including both short-term and long-term projects. However, the selection of the best time for an individual project to be undertaken will depend on a variety of factors. If undertaken independently in a distributive business or by State or local DE personnel, the research will need to be fitted into the schedule of work, usually avoiding peak periods of business. If undertaken as graduate work, the time will be determined by the requirements of the particular college in question.

An estimate should be made in advance of the time needed to complete the project and to set a tentative terminal date; otherwise it is likely to drag on. Estimating time also helps determine whether the research should be a long-term project or could be more profitably handled as a series of small projects.

Where?

Again, the answer to this question depends upon the nature of the research. However, to be practical it must be in contact with the field itself regardless of whether it is being undertaken by State or local DE personnel or employees in a distributive business. A "research desk" is not essential.

Who should do research?

Too often we think of a research worker only in terms of his responsibility for writing a final report or supervising a project. In practical research, many persons may have had a part in the final product.

Individual versus group research

Individual research refers to investigation planned and carried out by one person. Examples are a study undertaken as a graduate thesis, a survey made by a research specialist, a project developed by a teacher working alone. Individual research is simpler to supervise, but is more limited than group research.

Group research involves the participation of a number of people working together on a joint project, such as the development of a new course by a group of coordinators working in conference, or a service shopping survey in which a number of members are responsible for gathering and presenting data.

While group research is more complicated to handle, it has certain advantages over individual research. It can be broader in scope and brings in the factor of involvement, making for greater interest in results. Most important, a number of individuals benefit simultaneously from training in research techniques.

Selection of research personnel

Who will undertake research depends upon whether the project is of formal graduate nature; semiformal, as represented by surveys not governed by thesis requirements; or informal, carried on as part of routine procedure in schools or distributive businesses. Distributive Education Club projects are an example of the latter.

Basic requirements for all research workers

Every research worker should have (1) a clear understanding of the purpose of research and the problem to be investigated; (2) knowledge of, or training in, research techniques; and (3) adequate supervision, if not working independently.

Practical research is not a rehashing of material or the assembling of information without regard to its eventual use. Neither is it a hit or miss method of solving a problem. Both the problem and its solution should have significance in the betterment of performance in distribution.

Desirable personal attributes

The following personal attributes are characteristic of a good research worker:

Ability to organize ideas: This implies ability to discriminate between essentials and nonessentials and to arrange ideas in orderly sequence. It is the basis for all good planning. It may also include ability to follow directions.

Stick-to-itiveness: Much research is tedious. Patience in seeing a project through to satisfactory completion is therefore a vital asset in research work.

Imagination: It takes imagination to initiate and develop new ideas so needed in distribution. Imagination may be shown in the selection of the problem, in the method of approach, or in application. It must also be present in the interpretation of findings—to see beyond the obvious.

Ability to communicate: Since practical research involves putting results into action, ability to communicate both orally and in writing is an essential ingredient. It is also needed in obtaining information from others.

Intellectual honesty: An objective attitude must be obtained. This implies being honest with the facts, not distorting them to uphold a preconceived theory or notion. The purpose of research is to discover, develop, and verify, not to build false evidence.

II. Answering Questions

Should I undertake research?

PRACTICAL RESEARCH takes careful planning, diligent effort, and plenty of time for thought and attention to detail. If entered upon lightly, it will result in wasted effort. Answers to the following questions will help you make a decision.

Do I have problems that need research?

Many problems that come up in work do not need research, they solve themselves, or are not of sufficient importance to warrant a thorough investigation. They belong in the category of "nice to do" rather than "must do"—the area of practical research.

Are solutions already available?

Duplication of effort is wasteful. Before initiating research projects, it is only common sense to find out whether or not someone else has the answers.

Am I able and willing to take the time involved?

Effective research cannot be squeezed in at odd moments. Special time must be set aside for this work. Unless you are in a position to make this time available in your schedule, it is wiser not to attempt it. You should be thoroughly committed to see it through, before you start.

Will the results be worth the effort?

We have all had the experience, in examining a piece of research, of saying to ourselves, "Very interesting—but was it worth all that effort?" Anticipating this answer will help to keep your research practical.

Do I know how to go about conducting or directing research?

Undirected research is impractical. Knowledge of practical research procedures is essential. Such procedures are discussed in detail in Section III, "Carrying Out Procedures."

How do I discover suitable problems for research?

Some problems thrust themselves upon us. Others need to be searched out. Following are examples of the various ways of doing this:

Keep a list of problems as they come to your attention and refer to them periodically.

Make a list of difficulties encountered on your job and analyze them for problems.

Study complaints and breakdowns for problems.

Look for gaps in information.

Study areas in need of evaluation.

Anticipate changes which will require new information.

Study "Forty Ideas in Areas for Investigation" listed in OE–82009, *Patterns of Research in Distributive Education.*

Call for suggestions from the field.

Hold conferences of DE personnel on critical problems to be studied.

Where do I begin?

When a number of problems are clamoring for attention, try listing them in order of preference, in the light of the following criteria:

Degree of need

How badly is the research needed? Is it essential for further progress? Will lack of investigation handicap performance? Will the solution of the problem improve distribution? Is it a *must do?*

Immediacy of need

Is the research affected by seasonal activity? Must it be done now, or can it be undertaken at a later date? Will its effectiveness be lost if it is postponed?

Breadth of application

How many will it affect? Will the results be widespread in application or limited in use?

Possibility and cost of achievement

What is the likelihood of successful achievement in the light of time, personnel, and cost involved? Will it be worth the effort?

How shall I proceed?

The following outline of five basic steps in carrying out practical research should serve as a guide in conducting and directing any type of research project. If the project is to be handled on an individual basis, the research worker will be responsible for carrying out all the duties indicated. In group research, the procedure will be developed in group conference, although certain duties may be assigned to smaller groups or to individual members.

I. PLANNING
    - Define the problem
    - Determine method of approach
    - Set up a time schedule

II. COLLECTING INFORMATION
    - Prepare necessary forms
    - Arrange for time and place
    - Obtain and record information

III. PROCESSING INFORMATION
    - Organize information
    - Check, interpret, and evaluate findings
    - Prepare in written form

IV. PUTTING FINDINGS TO WORK
    - Present findings
    - Try out findings
    - Follow up results

V. EVALUATING RESULTS
- Evaluate findings and methods used
- Evaluate the byproducts
- Draw up conclusions and recommendations

Analysis procedures in practical research

For the types of analyses used frequently in practical research see pages 9, 10. A *duty* analysis refers to *what* to do; a *method* and *difficulty* analysis to *how* to do it.

A difficulty analysis is used where time is at a premium, since it concentrates on only those points which are causing difficulty and are in need of attention. Anticipating difficulties and formulating possible solutions in advance help in carrying out research itself. As a case in point, the following difficulty or problem is encountered by students and distributive personnel alike:

Difficulty

To find time to carry out research.

Possible Solutions

- Set aside a definite time each day (or week) to work on the problem.
- Make a time schedule and stick to it.
- Utilize others in collecting and processing information, where permissible and possible.
- Utilize all spare moments.

Discovery of "unrecorded specifics"

Practical research results in the discovery of many "unrecorded specifics"—that is, solutions that have not been put down in writing or that an individual may not even know he possesses. They come to light in talking with workers in the field, in observing them in action, and in meeting with groups. A good researcher is constantly on the alert.

Analysis Procedures in Practical Research

Job Analysis

Definition: The process of determining and reporting pertinent information relating to the nature of a specific job.

Use: As a basis for job evaluation, job specifications, and training.

Form: Essay, outline, checklist, depending on use to which information is to be put. May include in addition to a job description, any or all of the other types of analyses.

Duty Analysis

Definition: An outline of the duties involved in the performance of a given job.

Use: As a basis for allocation of duties and responsibilities; for improving procedure; and for training.

Form: Outline arranged according to importance (frequency or degree of difficulty), chronological order, or natural functions.

Difficulty Analysis

Definition: An orderly presentation of the problems or difficulties encountered in carrying out duties together with suggested solutions.

Use: As a basis for improving procedure, and for training and evaluation.

Form: Usually in outline form arranged according to frequency, natural functions, or a combination of both. Difficulty is stated in infinitive form; solution in the imperative.

Process or Method Analysis

Definition: An analysis of the steps or duties performed on a job.

Use: As a basis for spotting weaknesses, for improving procedure, and for training.

Form: Many and varied. May take form of a process chart.

Time and Motion Study

Definition: An analysis of the separate motions, or the time required, in the performance of a unit of work.

Use: As a basis for improved procedure, usually with repetitive work. Time and motion studies are frequently combined.

Form: Motion study usually presented in chart form or motion pictures; time study in a frequency tabulation.

III. Following Procedures

Planning

THE PLANNING STEP determines your goal or where you want to go, how you will get there, and method of approach and timing of each major activity. Thought given at this stage saves time and results in a more effective end product.

Define the problem

Lack of precision in defining the problem is one of the greatest weaknesses in research. Limitations as to scope, should be set at the beginning, so that the investigation does not become unwieldy. If it is to be a survey, is it to be conducted on a national, State, or local level? If a course of study, for whom is it intended? Will subject matter be developed in breadth or depth?

Defining the problem does not imply that changes will not be made while the study is in progress. If it is found that several problems are involved, for example, the problem must be further refined. Consider the possible use of results in clarifying the problem. Then, be sure to put the problem down in writing. Examples of such problems might be:

Make a survey of customer shopping habits in a given
____
(Community or organization)

Prepare a handbook for DE Training Sponsors.

Make a followup survey of students attending adult courses in __________ from __________ to __________.
(community) *(dates)*

Plan a layout for a Christmas toy department.

Determine method of approach

For convenience, methods of approach may be classified under the following four headings: Performance, Observation, Questioning, and Study and reading. One, or all of them, may be used on a given project.

Performance has the advantage of total involvement of the research worker, but is time-consuming and limited in scope. It is an excellent method, however, when used in combination with others. For example, if the problem is one of developing a special selling technique or preparing a merchandise manual, actual selling is a desirable basis on which to start. Observing and questioning others will strengthen the information discovered.

Observation is a valuable approach provided it is directed. In developing a new layout for a schoolroom or a department, for example, visiting other establishments for ideas will uncover useful information. Time and motion studies are built on both performance and observation.

Questioning, the most frequently selected approach, lends itself to widespread use. It may take the form of a questionnaire to be sent out or used in personal interviewing. Its success depends upon careful selection and wording of questions and careful choice of respondents.

Study and reading, the "armchair" approach, has a place in practical research, as a basis on which to build. It must not be relied on too heavily, however, or the practical value of the research will be lost.

Set up time schedule

In order to keep a research project moving, set up a time schedule of due dates to be met, and stick to it. The following is an example of such a schedule:

Schedule for Annual Followup Survey of DE High School Graduates
in ____________

1. Read available material on subject for ideas by ____________.
   (*date*)
2. List main topics on types of information to be covered by ____________.
   (*date*)
3. Start gathering information by methods decided upon on ____________.
   (*date*)
4. Start processing information obtained on ____________.
   (*date*)
5. Prepare first draft of report by ____________.
   (*date*)

6. Prepare final draft by ____________
(*date*)

If the research is undertaken as a graduate thesis, other dates required by the institution in question may be added.

Collecting information

This step is likely to extend over a period of time, since it involves gathering together all information pertinent to the final report. It may be the most tedious phase of research, since it requires careful attention to detail and usually some unproductive waiting.

Prepare necessary forms

Care in the preparation of forms will lighten the burden. Whether using a mail questionnaire or obtaining information through personal interviews or group meetings, keep respondents in mind. Word questions or statements in the language of the respondent and include only essential items. A one-page questionnaire is more likely to receive a reply than one of two or more pages.

Some interviewees do not like to commit themselves in writing. Often the best device to circumvent this difficulty is a form you can fill out yourself. Half sheets of paper on which answers to individual questions may be jotted down look less formidable to the interviewee than a lengthy page. Such short forms also simplify your task of sorting the material.

Allow ample space for recording. Crowded spacing discourages respondents and makes it difficult to interpret what is recorded. If information is to be typed in, fit lines to typewriter spacing.

In preparing all forms, consider how you will tabulate or organize your results. Make out master tabulation forms in advance as a guide in spacing individual forms and as a check on inclusion of all needed information.

Finally, if possible, sample-test your questions and forms before using them on a widespread basis, to see that all points are clear and the forms workable.

Arrange for time and place

The selection of time and place of meeting your respondents should be based on their convenience, rather than your own.

In selecting the time, allow plenty of leeway for possible changes and avoid periods when individuals will be rushed. In sending out questionnaires, make the terminal date definite. In personal interviews, try to set a definite time and do not overstay your welcome. If you are meeting with a group, try to begin and end on time. If appointments are made somewhat in advance, remind your respondents of the time and date shortly beforehand.

The selection of place will be determined by the nature of the study. Include on all written questionnaires the address to which returns are to be sent. For personal interviews and group meetings try to find a quiet spot, free from interruptions.

Obtain and record information

For simplicity, consider plans for obtaining information on an individual basis and through group meetings and plans for recording information obtained.

Obtaining information on an individual basis, although time-consuming, allows you to see clearly what you are getting and to check on errors at the source. You may, however, fail to see the part in relation to the whole. Always keep the total picture in mind. Be alert to the personal element whether working alone or getting information from another.

The following reminders point up different techniques present when obtaining information by the four usual methods.

Obtaining information on an individual basis

Performance	Observation	Questioning	Study and reading
Define job or task clearly.	Observe with an open mind.	Explain your purpose.	Follow a plan.
See the part in relation to the whole	See the part in relation to the whole.	Word questions clearly.	Select references with care.
Distinguish between major and minor points.	Learn from mistakes as well as from correct procedures or statements.	Use discretion in questioning—don't overdo.	Organize what you have discovered.
Look for fine points	Be considerate in observing.	Make sure you understand the answers given.	State references used, correctly and fully.

Obtaining information through group meetings is a timesaver, but in some ways lacks control. It is difficult to clear up misunderstandings and fill in information missed at the time the group met. To minimize the difficulty keep four points in mind for conducting the meeting:

Follow a plan.

Make your directions easily understood.

Clear up questions at the time of meeting.

Spot check information given during meeting, to be sure members are on the right track.

Recording information can present problems unless care is taken in the process. Again, following four simple rules will help assure comprehensible, accurate, and complete information when results are ready to be compiled.

Devise a system of recording and stick to it.

Be tactful in recording, when using observation and questioning.

Write legibly—remember you will have to read it later.

Review information before it gets cold.

Processing information

Processing refers to getting all information into proper order for presentation in oral or written form. It involves organizing material according to some system; checking, interpreting, and evaluating information; and putting information into written form.

Organize information

Information gathered through research usually comes in piecemeal, at different times and from different sources. Consequently, some system must be worked out in advance for getting each bit of information into its respective category, thus making the job one of accumulation. To avoid confusion, use good physical organization, such as reserving a special place for all information pertaining to the study, and utilizing labeled folders and files, where appropriate.

Check, interpret, and evaluate

Checking involves a physical count to see whether all information is at hand, as well as the editing of specific items. It may require further followup for missing information, correction of errors in grammar and spelling, and reconciliation of conflicting statements or data. For example, figures may not total correctly.

Two types of interpretation come into play—the deciphering of handwriting and the figuring out of meaning. Try to understand the other person's statements and don't lose a good idea because it is not expressed in your words.

Not all information gathered may necessarily be of value. The study may even have taken a slightly different turn than originally planned. So, at this point, weed out what is superfluous or of doubtful authenticity and determine whether or not there is further information that should be added.

Put results into written form

If the study is of a statistical nature, tabulation will be involved. Use the following points to make this step easier:

Use uniform work sheets—not odd scraps of paper.
Make legible figures.
Take pains to transfer figures to master sheets correctly.
Use mechanical aids, such as adding and calculating machines for speed and accuracy.
Check and double check all figures.

For information on the preparation of visual aids, see section VI.

The particular written form a study will take is determined by its nature and use. A thesis, for example, has a definite format prescribed by the graduate school concerned. A DE unit of study usually conforms with a State pattern. Results of a survey may be expressed in a memo, or cover many pages. A procedure may be outlined while a change in floor plan may entail a drawing, accompanied by a note of explanation.

Whatever form is used, the following pointers apply in its preparation:

Block out the entire report into major sections.

Determine form of address, with readers or audience in mind (i.e., "we," "you," "it").[1]

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[1] It is not mandatory in informal, practical research to use the impersonal pronoun.

Write up one section to get the feel of the report and a sense of accomplishment.

Modify the major plan in the light of the section developed.

Complete remaining sections, not necessarily in order of sequence.

Read over entire study and make necessary changes to improve consistency.

In addition to writing up the study in full, you may be called upon to report on it or to prepare an abstract. In such cases, the problem will be one of condensation and selection of salient points. You may also be requested to write an explanatory statement of the project for an annotated bibliography or State "Annual Descriptive Report." The following are examples of such statement:

Progress Report Form, DE 12. A rating sheet to be used by training sponsors in evaluating progress of cooperative part-time students on the job, together with directions to the coordinator on use. Revised form incorporates suggestions from over the State.

Customer Opinion Questionnaire for Dry Cleaning Establishments. A form prepared and tested by 10 interviewers at the request of Richmond leaders in the dry cleaning field, with recommendations for use.

Ye Primer for Supervision. An illustrated handbook on supervision developed by a special committee of DE personnel at a Supervisors' Leadership Conference in Williamsburg.

See Section V, "Hints on Written Form" for further suggestions.

Putting findings to work

The results of practical research are to be presented, tried out, and followed up. A period of time may elapse before a practical research project can rightly be called completed. For example, a unit of study may be developed for adult training, but until it is actually taught its practical value cannot be determined. In a like manner, a survey of customer buying habits may be made in a community, but only when the results have been presented to the merchants concerned and some action taken, can the project be considered of *practical* value.

Present findings

You will probably want to present the results of your research to a limited audience, before giving them widespread distribution, either written or oral. If it is a thesis, for example, it is customary to submit a rough draft to a supervisor before turning it over to the graduate committee for approval. A reviewing committee of coordinators may be asked for suggestions before putting a unit of study in final form for statewide distribution. Club projects of DE students will probably be entered in an area contest, as a preliminary to possible presentation on a State or national basis.

In like manner you may present the results of a shopping survey orally to a selected merchants' group before preparing them for statewide release. Research undertaken by a teacher-coordinator locally may be reported first in a workshop, then at a State conference. Findings in school surveys may be presented to PTA meetings or to special school groups, such as guidance personnel, before general release.

Such procedure achieves two objectives. It tests the effectiveness of the presentation and shows places where changes may be necessary. Both are important, for the effectiveness of a piece of research depends on both content and presentation. The findings of a good piece of research are put in jeopardy by a poor presentation. On the other hand, while an excellent presentation may enhance the importance of research findings, it cannot compensate for superficial or faulty research procedure.

The following words of warning on presentation of findings are helpful in achieving best results:

Keep the form of presentation simple.

Keep the audience in mind.

Follow meticulously rules laid down for the presentation.

Keep in mind in selecting format the fact that you and others will eventually be applying the information.

Observe limits of time and attention.

Do not depend upon presentation to cover up weaknesses in content.

Try out presentation on a selected audience before making study generally available.

Sections IV–VI go into presentation in greater detail.

Try out findings

The process of trying out the findings may be your responsibility as the research worker initiating the study, or that of the persons to whom you are presenting the results. When the results are to be tried out by others, you will do well to include in your study recommendations for their use.

While enrolled in a DE adult class, for example, a salesman may work out a special system for reducing returns in his department. He would probably first present his plan to his immediate supervisor and perhaps to his instructor also for approval, before putting it into effect. He would then try it out in his department. Or, a curriculum schedule developed by a committee might be tried out by a number of teacher-coordinators over a State. Or, results of a parking survey might spark a line of action to be taken by individuals concerned, such as a merchants' group.

Remember also that some preliminary tryout may be made during the preparation period in pretesting forms, for example.

Followup results

The frequency with which such questions occur as "Whatever happened to that plan you developed?" or "Have you actually used the revised form sent out?" or "Just when *do* you expect to teach the new unit?" make it apparent that results must be followed up if the effectiveness of the research is to be evaluated.

The followup may be made in person, by questionnaire, or through workshops on a local, district, State, or national basis. It will usually cover the following points:

Place where findings were tried out.

Number and types of persons involved.

Time of year and length of period involved.

Results—strong and weak points.

Suggested changes and recommendations.

Evaluating results

You evaluate your results to determine whether or not the research is of practical value; whether the most effective procedure was used to achieve your purpose; what byproducts resulted, if any; and what recommendations will be made on the basis of the evaluation.

Evaluate findings and procedure

The three criteria mentioned in defining the purpose of practical research should be used in evaluating your findings. Did the study *discover*, *develop*, or *verify* data? Perhaps it did all three. Further criteria are implied in the following questions:

Is the study significant in terms of need and scope?

Does it fulfill its purpose?

Are the findings being put to practical use?

What are its strong and weak points?

In evaluating procedure you should ask yourself whether or not the best time and place were chosen; whether or not the most effective methods of obtaining and processing information were used; and, if the study was to be made again, would you change your procedure in any way?

Consider possible byproducts

Sometimes the byproducts of research are as significant as the research itself. For example, while a questionnaire to measure ideas on distributive education held by guidance personnel may not show startling results, it may have served as a refresher training device and been an excellent method of motivating participation of the teacher-coordinator in the career guidance program. Followup or shopping surveys may vary little in results when conducted on a yearly basis. The decision then might be to discontinue such surveys for a time or change the form of report used. Research studies frequently point the way to further research in areas brought to light by the initial study.

Draw up conclusions and recommendations

In practical research, it is in the conclusions and recommendations that your audience is primarily interested. For this reason they are frequently placed at the beginning of a report, so that the gist of the study may be quickly comprehended. Recommendations may also take the form of a memo or letter, attached to the main study. The following hints are well borne in mind in writing recommendations:

Writing Recommendations

DEVELOP THE CORRECT APPROACH

Assume a positive attitude.

Take a practical viewpoint.

Remain objective.

Strive for proper perspective.

ORGANIZE AND STATE INFORMATION CLEARLY

Determine best form of use, such as memo, letter, report, or combination, keeping reader in mind.

Make points stand out by proper grouping, headings, and spacing.

Make a clear-cut distinction between explanation and recommendations.

Give sufficient information to substantiate recommendations.

Include specific examples.

WATCH YOUR LANGUAGE

Avoid use of personal pronoun "I."

Show tact in choice of words.

Be accurate in use of terms.

Be concise.

GET THE FACTS . . . WEIGH AND DECIDE . . . SUGGEST ACTION

IV. Handling Statistical Data

ONE DOES NOT NEED to be a statistician to handle statistical data correctly, since informal research rarely requires complicated formulas. However, you should take certain precautions if your research is to be labeled honest and comprehensible.

Be ethical in use of statistics

The first principle to follow is to be objective and honest in what you present and in what you leave out. This can be achieved by observing the following rules:

Avoid personal bias

Try to avoid a preconceived idea of the outcome of the study which will tend to color your thinking and selection of data. Too strong a commitment may result in a distorted picture. Be open-minded and let the chips fall where they may. Remember that while the purpose of research may be to verify, it is never to prove.

Present all the facts

Avoid the temptation of leaving out data that tend to negate or obscure results. Present both the pros and the cons. While it may be advisable to stress the positive in publicizing results, make it clear that you are presenting only that part of the data. Do not make generalizations on insufficient data.

Use appropriate statistical measurements

It is easy to mislead by the misuse, intentional or otherwise, of statistical measurements. An average or percentage has little meaning if based on too few cases. A graph or pictorial chart may deceive, as well as reveal. Take pains to select measurements that will give an honest picture.

Use measurements of central tendency correctly

Measurements of central tendency are used as a form of generalization. They represent a compromise which describes the general trend. The three in common use are the *mean*, the *median*, and the *mode*.

Use the arithmetic mean when extremes are absent

The arithmetic mean is the average found by dividing total scores by the number of cases involved. It is a simple measure to compute and is usually adequate, when there are no extreme cases present.

Use the median when variability is great

The median is that figure above and below which there is an equal number of cases. It is found by listing the cases in descending order and striking the midpoint. It is the appropriate measure when variability is great. For example, salaries or hours of work may vary greatly from business to business, or in different localities. In these instances, use the median as the average, so that a few very high or low scores will not distort the whole

Use the mode to indicate greatest frequency

The mode is the figure, or figures, that occurs most frequently in a series. Sometimes there is more than one mode. It is the simplest measure to compute, since it can be found quickly by inspection. It does not tell as complete a story, however, as the mean or median.

Take reliability and variability into account

It is not sufficient simply to state an average if great variability is present. Both variability and reliability should be indicated.

Use the range to indicate extremes

Show the range—that is, the highest and lowest score in a series—with the average, when variability is great. Frequently it is the extremes that should receive attention, rather than the average itself, since they indicate that some factors are out of line.

Indicate number of cases on which measurements are based

Always indicate the number of cases involved. This, in itself, will be some indication of reliability. Do this in tables, charts, and graphs, as well as in your introductory material.

Use percentages and correlation coefficients advisedly

Use of percentages is helpful when large figures are involved, or as a common factor in making comparisons. Percents based on only a few cases are meaningless. It is clearer to say 1 out of 10, or 3 out of 5, or 10 out of 15 when numbers are limited, than to use percentage.

Be accurate in indicating correlation. Just because two sets of comparable data seem to vary is not sufficient justification to postulate a high positive or negative correlation, statistically. To be accurate, you would need to work out a coefficient of correlation, together with its probable error. Since such measurements may not be readily understood by your readers or listeners, you may prefer to indicate the relationship in graphic form.

Set up comprehensible tables

Tables can be devastatingly dull and confusing or really informative. They should help clarify, not complicate the facts presented.

Consider reader or audience viewpoint

View your tables as your reader or audience will meet them for the first time. Do they tell the story quickly? Is there enough but not too much detail? Are they easy to read, legible, and well-spaced?

Group data

Try grouping data in various ways until you find the arrangement that most clearly tells your story. Much information can be included, provided proper grouping is achieved.

Label tables and charts clearly

See that titles actually agree with the content presented. Make them sufficiently concise to be easily grasped. Number them, if necessary, for easy reference.

Show insight in interpreting data

Figures rarely can stand alone. You need to interpret them for your reader or audience, so that their full meaning will be clear. In so doing, observe the following pointers:

Avoid the obvious

To repeat what is obvious at a glance is not interpretation. Point out relationships and pick out significant factors that may be overlooked.

See implications

Be alert to see implications in the data you are presenting and bring them to the audience's attention. This deals with the "so what" phase of your study. For example, the fact you might have found in a survey of DE student placements, that a number of new types of businesses were being used as training stations, might have several implications. It might indicate that teacher-coordinators were being successful in extending their area of service beyond the retail outlets on main street. It might suggest the possibility of publicizing these new training stations in order to encourage other distributive education personnel to explore the possibilities in their communities. On the other hand, it might point to the need for analyzing the work carried on in these businesses, to be sure that they were offering opportunity for bona fide training in distribution. It might even flash a red light that the placements were getting over into occupations served by another vocational field. Incidentally, here might be a case where variations from the norm become more significant than the central tendency.

V. Writing the Reports

THE FORM in which the research is presented often determines whether or not it will be read or listened to and whether it will even be applied. It must compete with other written material for readership. Here are a few guides to readability.

Create interest

Catch and hold attention by making your audience feel that you are talking to them. They must be able to get information quickly and understand how it is to be used. The following three rules will aid in achieving this end.

Keep audience in mind

Write to your audience, recognizing that while many do not have advanced formal education, they may be fully versed in the area of your subject matter. Do not talk down to your audience, on one hand, nor use unfamiliar, academic jargon on the other. Keep their level of maturity and experience in mind.

Eliminate nonessentials

Do not clutter up your writing with nonessentials, however interesting to you, that will confuse the audience. Use straightforward language and lead straight into your point. Avoid being a bore by not being pompous.

Use telling illustrations

Let concrete examples make your points for you. This will help to hold attention and make application simpler.

Achieve clarity

Clarity is a prime requisite in writing up research. This is achieved in a number of ways.

Use proper outline form

Good outline forms is the basis of good organization. For full outlining use the following accepted symbol pattern:

I.
    A.
        1.
            a.
                (1)
                    (a)

Reserve the use of Roman numerals and capital letters for the expression of central ideas. Avoid lengthy enumeration, particularly in using an alphabetical symbol system. Long lists of items tend to be skipped over lightly and the items themselves, not retained. Grouping increases their attention and retention value.

Utilize indentation and spacing

Show organization through indentation and spacing, so that major and subpoints can be recognized at a glance.

Capitalize and underline judiciously

Set major headings off by use of capitals, reserving underlining for subheadings. Since underlining is used for emphasis, do not overuse. Remember, too, that underlining indicates use of italic type, when material is to be printed.

Avoid indiscriminate use of capitals, reserving them for major headings and names of titles. For example, do *not* capitalize distributive education or teacher-coordinator, unless you are referring to a specific individual or program with such a formal title.

Use parallel construction for coordinate ideas

Use identical grammatical structure in expressing coordinate ideas.

Match noun phrase with noun phrase.

Match tense of verb with tense of verb.

Match voice of verb with voice of verb.

In like manner, keep your subject uniform, instead, for example, of changing back and forth from you to they.

Conform to good writing

Good writing refers to more than good English usage. You may use correct English, and yet fail to achieve readability. Practical research should be expressed in direct terms, while following rules of grammar and punctuation.

Use the active rather than the passive voice

Since it is taken for granted, in practical research, that you report what has been discovered, the use of such phrases as "it was observed" or "it was found" is superfluous.

Use the active voice to give movement to the presentation. Use the imperative, or the present tense in developing duty or job analyses.

Follow rules of grammar

Check sentences to see that subjects and predicates agree, that pronouns are used correctly, particularly when employed as compound objects after a preposition. If you are unsure of yourself on any of these or other points, refer to an English grammar text.

Watch punctuation

Use commas to indicate an interruption in continuity of thought, avoiding indiscriminate sprinkling. Use dashes and exclamation points sparingly, and only when they lend meaning or impact. Be careful that you place quotation marks in proper relation to commas and periods. Again, if you are uncertain, refer to an English grammar text.

Spell correctly

Remember that misspelled words lessen the effectiveness of your presentation, because they tend to arouse the reader's suspicions as to your competency. Few persons are infallible spellers, so write with a dictionary handy.

Use words intelligibly

In writing, research workers are prone to select words foreign to their normal way of talking. They "ascertain", for example, instead of "find out" or "discover." This makes for stilted, unintelligible writing. On the other hand, much writing lacks preciseness in vocabulary due to a tendency to fall back on a limited, overworked vocabulary. To write intelligibly requires concentration and effort. The three rules that follow are steps in that direction.

Use distinctive words

If your vocabulary is limited, either use a thesaurus for a selection of synonyms and antonyms from which to choose, or consult a dictionary to find the word that best conveys your thought. Try to express precise meaning. For example, if a result appears to be either satisfactory or unsatisfactory, in what respects is this true?

Use technical terms correctly

There are many technical terms peculiar to the field of distribution. Make sure they are used correctly, and define them, if they need explanation. For example, the words "marketing" and "markets" have several meanings. The term "service occupation" may not be familiar to some readers, although all would probably understand the expression, "goods and services." New terms constantly come into use, such as "post high school," "shopping center," discount house," and all the new textile and nontextile materials. Keep up to date on your vocabulary.

Use adjectives and adverbs sparingly

A simple statement of fact is frequently more effective than one embellished with adjectives and adverbs, so, use them sparingly. Make them count.

To express limitation, use such phrases as "*tentative* conclusion," "*specific* instance," "*limited* number of cases." To avoid too wide generalization, employ adverbs such as "frequently," "occasionally," "ordinarily," and "seldom"—but do not use them to cover up for uncertainty on your own part.

Use both adjectives and adverbs for emphasis or to express difference. A conclusion may be "striking," or a series of data show "unusual" variation. A response may have been "good" or "poor." Note that the use of "very" with "good" or "poor," tends to weaken, rather than strengthen, the statement.

Use adjectives and adverbs to express a point of view, such as a survey being "disappointingly unrevealing," a method "unexpectedly successful," the results "puzzling," or progress made "encouraging."

Prepare an acceptable manuscript

The finished product should represent your best efforts. Take pains to make it look the part by following the rules below.

Use correct spacing

Discover the required procedure on this. Triple spacing is often required in manuscripts submitted for publication. This permits easy correction between the lines. Graduate schools usually have a set regulation for theses.

Make clear notations

When it is necessary to make notations on your copy for the typist or printer, be sure they can be understood. Use the standard proofreaders' marks found in most dictionaries.

Make at least one carbon copy

Keep at least one carbon copy yourself. This will expedite matters if questions arise during publication and will protect you in case the manuscript is lost or mislaid.

Check typing errors

Correct all typing errors and make sure corrections are clear on all copies as well as on the original. Careful proofreading is tedious, but it pays off in the long run.

Read over entire manuscript for consistency

See that the table of contents agrees with headings in the text and that the listed titles of tables and charts agree with those in the text. See that visual aids are properly placed and that the appendix is complete. Finally, check page numbering throughout.

VI. Using Visual Aids

VISUAL AIDS are devices used to enhance the presentation of information. They vary in format from a simple line drawing, or a handout sheet, to a large chart, slide, or film, in black and white or color. They may be incorporated in the manuscript itself, or appear separately.

Determine what to use

You will need to take the following steps in choosing your visual aids.

Determine how information will be presented

Is your information to appear in written form, addressed to an individual reader, or will it be presented orally before a group? Both size and format of your visual aid will be affected by this decision. Can the visual aids be made to serve both purposes as they stand, as in the case of handout sheets, the original of which may be included in the manuscript? Can they be enlarged for group presentation without great difficulty or expense?

Consider possible kinds of aids to use

For convenience, visual aids may be classified under the following types:

Illustrations (cartoons, drawings, photographs).

Charts and diagrams.

Slides, film strips, and films.

Handout materials.

Sample forms and exhibits.

Chalk board, flannel board and pedestal chart

Use illustration to arouse interest and to lighten and break up subject matter. Simple line drawings and well-chosen cartoons can frequently tell the story quickly. Photographs and drawings, when appropriate, give a sense of reality.

Charts have been called the shorthand of statistics and are particularly suited to group presentation. Use line or curve charts in presenting frequency distribution, time series, and projection trends which show movement and direction of change. Use horizontal bar charts in comparing different components at the same time, such as yearly DE enrollment by localities, and column or vertical bars for picturing comparisons of similar components at different times, such as sales volume or student earnings, by month. While circle and pie charts afford variety in presenting comparisons of size, they are not as accurate as bar charts. Pictoral charts are effective in showing simple comparisons, if the symbols are accurately drawn. Map charts also create interest. Use poster or display charts to highlight main points and help keep your presentation moving. Use of color adds to their attractiveness but also to their expense.

When diagrams are used to show relationships or development, keep them simple, so they will be readily comprehended.

Use slides, film strips, and films to show a process in sequence, or special phases of it, and to show relationships. In selecting these devices, be sure the proper projection equipment will be on hand when the time comes for presentation.

Decide on the purpose of your handout material. Is it to serve mainly as a guide to be followed during the presentation, or as a summary or reminder, to take home for future reference? Observe the attention limits in either case, realizing that a long, detail sheet may confuse rather than elucidate. Indicate its use.

Use samples and forms for illustrative purposes and exhibits as you do films, to show relationships and a complete story.

The big advantage in the use of a chalk board, flannel board, and pedestal chart is that audience members see the material develop before their eyes. This helps to attract and hold attention. Plan in advance just what will be put on the boards or pedestal and where it will be placed. Try out your presentation before the meeting to assure a smooth performance. If desirable, show how the material will be presented, in the manuscript, by means of diagrams.

Estimate time and expense of preparation

Preparation of visual aids can run into a good deal of time and money. Consider in advance, therefore, whether or not the use of a visual aid will be justified and if both the necessary time and funds will be available. It is possible to spend so such time and effort on the preparation of visual aids that the subject matter suffers. The book's cover overshadows its contents. Avoid this danger.

Select enough but not too much

Since visual aids are meant to enhance presentation, consider carefully the number to use, otherwise they may detract, not add to the value of your contribution. Select enough to interest and to illustrate, but not so many as to confuse or cover up meaning. Observe the following rules in making your selection.

Determine space or time available

In written presentation, consider the total number of pages involved in relation to the amount of space to be devoted to visual aids. Is there a good balance? If the material is to be presented orally, how much time will be allowed for the presentation? How much should be given over to visual aids?

Consider possible coverage

Do you plan to use your aids throughout the entire presentation or will they illustrate special points only?

Select those most appropriate for purpose

Remember that a few well-chosen visual aids are more effective than a profusion of devices. This will probably mean selecting from those you have set aside as possibilities. Refer to the points mentioned under kinds of visual aids, in selecting those most appropriate for your purpose.

Prepare visual aids

Since many good textbooks are available on the preparation of visual aids, only a few points will be mentioned here.

Decide who will prepare them

Your answer to this question is a vital one, particularly if you are not gifted along this line. A poorly prepared aid is worse than none at all, since it takes attention away from subject matter and cheapens the product. Make use of lettering and poster aids, and materials provided by firms engaged in the production of materials for graphic presentation. If necessary, engage someone to prepare the aids, keeping in mind the expense it will entail.

Select materials appropriate to use

Visual aids must be large enough to be readily seen, yet not too large to handle conveniently. Out-sized posters in an oral presentation may prove awkward to manipulate, while the details of a small drawing or photograph in a manuscript, may be hard to distinguish.

Consider whether the presentation will be given only once, or will be repeated. If the latter, select materials that will be sturdy enough to stand wear and tear.

Allow time for preparation

Allow an extra margin of time for the preparation of your visual aids. They usually take longer than expected to prepare and may need revision before completion.

Use visual aids effectively

How you use your aids may be as important as what you use. The same care should be taken in handling visual aids as in showing merchandise. The following are three good rules to follow:

Space aids in presentation

Unless including all visual aids in an appendix, where, incidentally, they are likely to be overlooked, try spacing your visual aids to hold attention and sustain interest. Try out different positions on the page and in the manuscript to obtain the best effect, remembering to keep the text as close to the aids as feasible.

Tie in aids with talks

Study the best place in which to bring aids into your oral presentation. When projection equipment is required, it may be advisable to use aids at the beginning or end of a talk, to avoid the confusion of preparing the room twice.

Indicate in your script where visual aids will be used so that they may be shown easily, without hesitation. Be sure that they are arranged in order.

Show care in handling visual aids

Since visual aids are an added expense, they deserve careful handling. The teaching tips on how to display illustrative material, given below, will help you make the best use of these valuable devices in your presentation. As a final precaution—store visual aids in a safe, convenient place for future use. Keep them in good condition.

Distributive education

Teaching tips for trainers

HOW TO DISPLAY ILLUSTRATIVE MATERIAL

Major points	Special notes
1. Allow room for display	Clear a space. Arrange material neatly.
2. Show so all can see	Arrange material in order. Hold at proper angle and height. Pass from side to side. Don't peer over top. Pass small articles around. Put posters on easel, blackboard edge, or hang up.
3. Allow time to observe	Display slowly. Have members help distribute. Watch to see material gets around. Show after meeting, if necessary. Post on bulletin board.
4. Act as if valuable	Handle carefully. Look at material as you present it. Replace pieces, carefully. Explain purpose of material and direct how to use. Collect excess copies at end of meeting.

VII. Do's and Don'ts

DO	DON'T
Resolve to work on a research project this year.	Be afraid to try your hand at practical research.
Start on a short-term project, first.	Start a research project unless you intend to complete it.
Take part in group research, if requested.	Wait for others to initiate a group project.
Select a problem that really needs research.	Duplicate work already accomplished by others.
Set aside a special time for research.	Expect to squeeze in research at odd moments.
Follow the five steps.	Overlook the application step.
Familiarize yourself with analysis procedures.	Fail to recognize unrecorded specifics.
Define your problem clearly, and put it in writing.	Start with a preconceived notion of the outcome.
Select the best metho [illegible] thods to use.	Overwork the questioning method.
Set up a time schedule.	Allow your study to lag.
Allow ample space for recording, on all forms.	Forget to keep your respondent in mind in preparing all forms.
Recognize the advantages of obtaining information through group meetings.	Limit yourself to the use of individual interview, in obtaining information.
Devise and keep to a system of record keeping.	Let your recorded information get cold, before reviewing it.

DO	DON'T
Organize your information as you go along.	Use a slipshod method of handling your information.
Check on all information received.	Fail to follow up on missing information.
Try to see into another's personal contribution.	Include information of doubtful authenticity.
Follow the prescribed pattern in writing up your study.	Minimize your results through careless writing.
Present your results to a limited audience first.	Rush into publication without thought.
Be prepared to modify your report on the basis of a trial presentation.	Count on a good presentation covering up a weak piece of research.
Include suggestions for trying out findings in your report, if you are not responsible for doing so.	Fail to follow up results.
Evaluate both findings and procedure use.	Overlook possible valuable byproducts.
Consider the best place in your report for conclusions and recommendations.	Use a negative or egotistical approach in making recommendations.
Be ethical in the use of statistics.	Permit personal bias to enter into the selection of data you present.
Use the median when variability is great.	Forget to indicate the number of cases on which your measurements are based.
Use graphic presentation to indicate correlation.	Use percentage when number of cases is small.
Group data, in setting up tables.	Include many details that will confuse, in setting up tables.
Help interpret your data.	Labor the obvious, in explaining tables.

DO	DON'T
Point out implications to your audience.	Expect your audience to see all the fine points.
Write to your audience, recognizing educational level and experience.	Clutter up your report with nonessentials.
Use accepted outline form.	Use lengthy enumeration of items.
Use the active rather than passive voice.	Use stilted phrasing.
Use the dictionary to improve your vocabulary and spelling.	Let your technical vocabulary become outdated.
Prepare an acceptable manuscript.	Fail to make at least one carbon copy of your manuscript.
Use visual aids to enhance your presentation.	Go overboard in the use of visual aids.
Become familiar with the proper use of different kinds of statistical charts.	Use statistical charts indiscriminately.
Keep in mind the time and expense involved in the preparation of visual aids.	Fail to make full use of all handout materials prepared.
Plan what you are going to present on chalk and flannel boards and pedestal charts.	Spend so much time on the preparation of visual aids that your content suffers.
Refer to textbooks in the bibliography for further information on visual aids.	Let poor handling of visual aids spoil your presentation.
Realize that you, too, can do research.	Consider practical research the job for experts.
Recognize the vital need for continuous research in the field of distribution.	Fail to make *your* contribution to research in distribution.

Bibliography

THIS SELECTED BIBLIOGRAPHY should be helpful to both experienced and inexperienced research workers. The list has been kept brief and the publications grouped under four classifications for easy reference.

Research Methods

Consumer and Opinion Research. A. B. Blankenship. New York, Harper and Bros., 1943.

Creative Marketing Project. New York, National Sales Executives, Inc., 1961.

Introduction to Research. Tyrus Hillway. Boston, Houghton Mifflin Co., 1956.

Techniques of Job Analysis. University of Texas, Extension Division, Austin, 1947.

Patterns of Research in Distributive Education. Washington, U.S. Government Printing Office, OE-82009. [n.d.]

Written and Oral Presentation

Business Reports. Anderson, Saunders, and Weeks. New York, McGraw-Hill, 1957.

Distributive Keynotes. Iowa State Department of Public Instruction, Division of Vocational Education, Des Moines.

Form and Style in Thesis Writing. William Giles Campbell. Boston, Houghton Mifflin Co., 1954.

Gettting Your Ideas Across Through Writing. Milton Hall. Training Manual No. 7, Federal Security Agency (now U.S. Department of Health, Education, and Welfare), Washington, 25, D.C., 1950.

Guide for Part-Time Instructors. Washington, U.S. Government Printing Office, 1955, Vocational Division Bulletin No. 259, Distributive Education Series No. 21.

Roget's International Thesaurus of English Words and Phrases. C. O. S. Mawson New York, Thomas Y. Crowell, Co., 1940.

Statistical Presentation

Graphic Presentation Simplified. R. R. Lutz. New York, Funk and Wagnalls, 1949.

Say It With Figures. Hans Zeisel. New York, Harper and Bros., 1950.

Statistics in Psychology and Education. Henry E. Garrett. New York, Longman and Green, 1953.

Preparation and Use of Visual Aids

Preparation and Use of Vicual Aids. Kenneth B. Haas and Harry Q. Packer. New York, Prentice-Hall, 1955.

Visual Aids, Their Construction and Use. Gilbert G. Weaver and Elroy W. Bollinger. D. Van Nostrand Co., 1959.

U.S. GOVERNMENT PRINTING OFFICE : 1963 O—714-972

UNITED STATES
GOVERNMENT PRINTING OFFICE
DIVISION OF PUBLIC DOCUMENTS
WASHINGTON, D.C. 20402

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE, $300

[redacted]

VT 002 586
Thrasher, James M.
A Survey of Need for Vocational Technical Education in the Butte Area.

Community Action Agency, Butte, Mont.
Office of Economic Opportunity, Washington, D.C. Community Action Program
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 66 123p.

*VOCATIONAL EDUCATION; *SURVEYS; YOUTH EMPLOYMENT; LABOR UNIONS; *TECHNICAL EDUCATION; *EDUCATIONAL NEEDS; *YOUTH OPPORTUNITIES; ATTITUDES; YOUTH; QUESTIONNAIRES; OCCUPATIONAL CHOICE; FEASIBILITY STUDIES; *COOPERATIVE EDUCATION; WORK ATTITUDES; PROGRAM ATTITUDES; HIGH SCHOOL STUDENTS; GRADE 12; PARENT ATTITUDES; STUDENT ATTITUDES; EMPLOYER ATTITUDES
BUTTE; MONTANA

The purpose of a series of surveys of parents of 289 household, 329 high school seniors, 381 firms, 19 labor organizations and 81 Neighborhood Youth Corps members was to secure valid information and opinions on vocational-technical education needs and employment potential of vocationally and technically trained persons in the greater Butte, Montana area. Some findings were: (1) 72 percent of the parents indicated they would definitely encourage their children to enroll in additional vocational classes if offered, and many desired to participate in such training themselves, (2) 95 percent of the high school senior students polled planned to graduate from high school, but many were seriously considering jobs requiring vocational-technical education, (3) No training was available in the Butte are for many occupations listed by youth as their choice, (4) Job Corps vouth cited salary and working hours as more important and working conditions as less important than all high school seniors, (5) 84 percent of the firms rated cooperative programs as effective, 89 percent indicated some willingness to participate, and 92 percent required high school graudation for employment, and (6) There was a shortage of trained workers in 32 percent of the organized jobs. Justification for an area vocational-technical training center was strongly reinforced by the findings of this investigation. The appendixes list four survey instrument forms. (WB)

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Mr. Harris

A SURVEY OF NEED FOR VOCATIONAL TECHNICAL EDUCATION IN THE BUTTE AREA

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT025586

Work is the inevitable condition of human life,
the true source of human welfare.

. . . Anonymous

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A SURVEY OF NEED FOR VOCATIONAL-TECHNICAL EDUCATION IN THE BUTTE AREA

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ACKNOWLEDGEMENTS

Butte-Silver Bow Anti-Poverty
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INTRODUCTION

This report presents the results of a series of surveys designed to secure valid information and opinions on vocational-technical education needs and potential for employment of vocationally and technically trained persons in the Greater Butte, Montana, area. It includes also discussions of the implications of the results.

The scientifically planned and conducted surveys were the result of the work of several people, most notably Dr. James Thrasher, Dean of the School of Education, University of Montana, and Mr. Maurice Driscoll, Director of Vocational and Technical Education for the Butte Public Schools.

The instruments used in the surveys were constructed during the spring of 1966 by the present author along guidelines outlined in documents and models provided by Dr. Thrasher. These instruments were administered during the summer of 1966 by a team of interviewers -- Mr. James D'Arcy, Miss Pat Powers, Mr. Ray O'Conner, Mr. Lewis Rotering, Mr. Dick Spurck, and Mr. Tom Wakely -- as part of a research project under the planning and direction of Mr. Driscoll. Since the research design , including sampling techniques, and the procedures employed for collection of the data were not the responsibility of the present author, they will not be described in this report.

Tabulation of the data gleaned was accomplished by use of electronic data processing equipment and was carried out under the guidance of Mr. John Peterson, Assistant Director of the Computer Center, University of Montana.

The total project was financed under a Community Action Program funded by the United States Office of Economic Opportunity and administered locally through Mr. Frank Gorsh, Director, Community Action Agency, Butte, Montana.

A STATEMENT OF PURPOSE

The spotlight has been focused upon vocational-technical education today as never before in the history of our nation. Burgeoning needs of our society have created a demand for action from leaders in government, industry, and education. Technological development has necessitated changes in job requirements.

Almost every occupation requires some degree of preparation before the tasks involved can be carried out with skill and competence. In primitive societies, the knowledge and skills necessary for survival were passed from generation to generation. In our modern society, the skills needed are more sophisticated and the training methods more formal, but the basic purpose is the same, to prepare people to make a living.

The amount of preparation now needed for employment has increased at all occupational levels. As our society becomes more complex, the demands upon all workers become greater and their tasks more complicated. The age of technology has brought higher education requirements, not only for the professional and the highly skilled, but also for those employed in supporting occupations. Progress and development in business and industry have been accompanied by increasing specialization of workers.

Passage of the Vocational Education Act of 1963, Public Law 88-210, was a significant event in educational history. It brought into sharp focus the need for vocational and technical training programs as a vital part of the total system of education. The full impact of this law will be felt as programs are developed within its framework to serve the needs of our citizens more effectively, hence the survey of vocational-technical education needs and potential for employment of the vocationally-technically trained in the Butte-Silver Bow Community.

A DESCRIPTION OF THE BUTTE-SILVER BOW AREA, HISTORICALLY, GEOGRAPHICALLY AND DEMOGRAPHICALLY

Butte began as a mining town, solely dependent upon the income from the ores taken out of "the richest hill on earth." At the same time that mining operations grew within the city, agricultural activity became increasingly important in the surrounding areas. In nearby Beaverhead County, Montana's livestock industry had begun; the numerous streams in the area favored irrigation for crop growing. Butte, in the center of this agricultural activity, became the area's main trading center serving the territory's farm and ranch population.

In short, the Butte economic base does not rest solely in Butte or only in Silver-Bow County. In a Master Plan Report for Butte-Silver-Bow County in 1960 a study survey of the Butte Trade Area was made. Studies of neighboring counties in states bordering Montana, as well as of each of the 56 Montana counties, were included in the research work to determine the Butte Trade Area. These studies revealed that the five southwestern Montana counties surrounding Silver-Bow form the sphere of Butte's influence: economically, physically and socially if not culturally. The Butte Trade Area covers the counties of: Beaverhead, Deer Lodge, Jefferson, Madison, and Powell as well as Silver-Bow.

According to 1960 census figures, the average population density of the six counties is 16.3 persons per square mile, as opposed to 4.3 persons per square mile in all of Montana. This figure for individual counties in the trade area, however, varies radically: from 1.3 in Beaverhead to 66.2 in Silver-Bow. Total population of the trade area was 89,000 in the 1960 census, again running to extremes, as might be expected: 4,297 in Jefferson to 46,454 in Silver-Bow, of which 28,000 lived in the city of Butte.

The Continental Divide, formed by the main range of the Rocky Mountains, separates water flow of the area into the Missouri River and the Columbia River Basin. Rugged mountain ranges bound the territory to the South and to the West; the county lines which define the area on the East, follow, in general, the eastern tip of the Rockies. The northernmost tip of the region is the extreme northern boundary of Powell County.

Mining is of prime economic importance to the trading area, with most of this activity centered in Butte itself. Beaverhead and Madison counties are mainly dependent on agriculture, which is also highly important in Jefferson and Powell counties. In Deer Lodge, with its state penitentary, 16.8 percent of the State's manufacturing workers are employed, manufacturing being employment at smelters as well as smaller manufacturing plants. Other centers of trade and population in the Butte region are Anaconda, Deer Lodge, and Dillon.

The population of Butte's six-county trade area rose to over 100,000 in the 1920 census. However, this same agency's figures for 1930, 1940, and 1950 indicate a successive population decline in the trade area for each decade: as compared with the total population in 1920. Population loss in the area in the period 1920-1960 amounted to 41%; this, while the state of Montana experienced a gain of 24%.

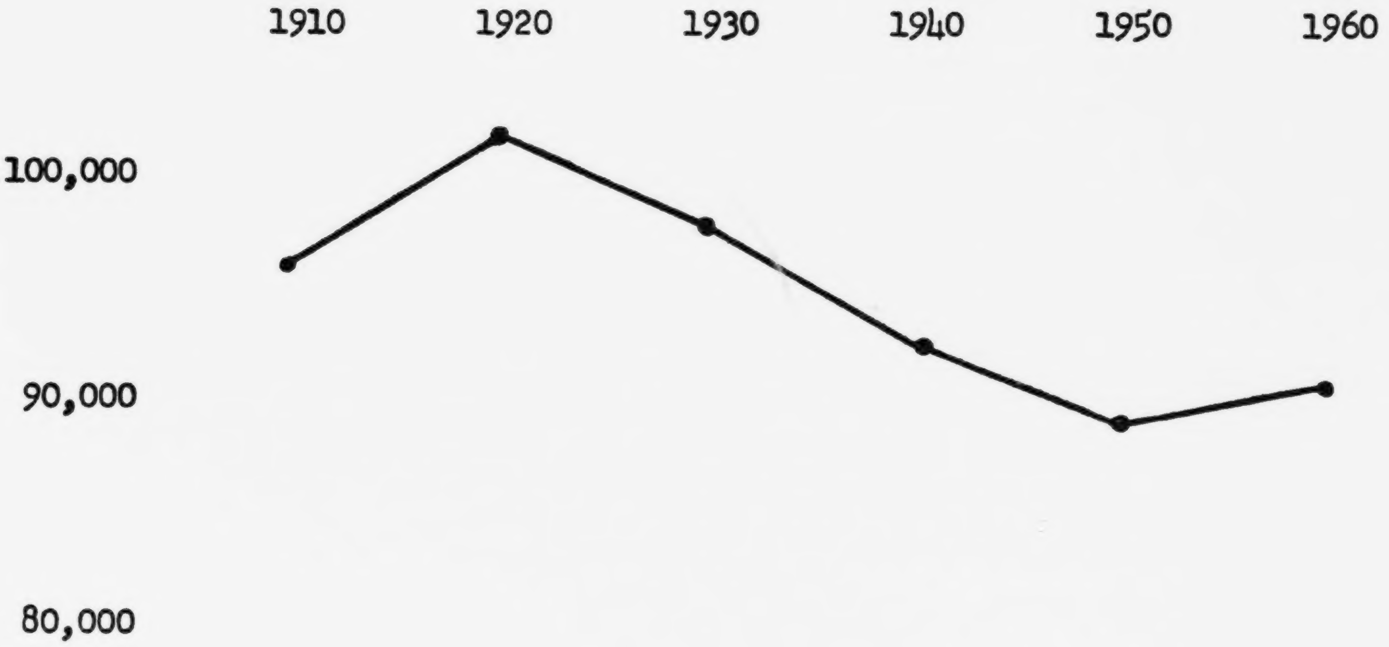
The median age of the population of the State of Montana is 30.0 years. Each of the counties within the trade area have a median age above that of the State; ranging from 31.8 in Jefferson to 34.2 in Madison. Approximately 8.7 percent of the State's population is 65 years of age or older and each of the six trade area counties exceeds the State average. An interesting point, that in the three predominantly agricultural counties of Beaverhead, Madison and Powell the percentage of people over 65 years of age in the labor force is 40.7, 50.8 and 40.1 respectively. Another demographic statistic regarding the trade area is that over 65 per cent of the male labor force is native to the State of Montana.

In 1960 the median income of the labor force in Montana was $5,403; it is interesting to note that not one county in the trade area surpassed that figure. The median income in the area ranging from a low of $4,470 in Madison to a high of $5,384, not in Silver-Bow, but in Powell, although the median income in the city of Butte was $5,887. Silver-Bow was a close second with a median income of $5,284, or one hundred dollars per wage earner, less than those in Powell County. The population of the Butte-Silver Bow Trade Area appears to be characterized by trends of population decline and a very definite pattern towards an older and aging population compared to the State as a whole and to other communities.

BUTTE TRADE AREA POPULATION TRENDS

(1910-1960)

County	1910	1920	1930	1940	1950	1960
Beaverhead	6446	7369	6654	6943	6671	7194
Deer Lodge	12988	15323	16293	13627	16553	18640
Jefferson	5601	5203	4133	4664	4014	4297
Madison	7229	7495	6323	7294	5998	5211
Powell	5904	6909	6202	6152	6301	7002
Silver Bow	56848	60313	56969	53207	48422	46454
Region	95016	102612	96574	91887	87959	88798



A REVIEW OF FEDERAL VOCATIONAL-EDUCATION LEGISLATION

The need for vocational education has changed as society itself has changed. The system of apprenticeship was adequate until the late nineteenth century when the technological and industrial development within the United States made the need for occupational education more apparent.

The first indication that Congress recognized this developing need was the Morrill Act of 1862, the first federal aid for vocational education. The Act provided for the establishment of agricultural and mechanical colleges in each of the states, known as "land grant" schools.

In 1906, the National Society for the Promotion of Industrial Education was formed in response to the growing concern of men in industrial education and training. As a result of the Society's efforts, Congress created a nine-man Commission on National Aid to Vocational Education in 1917. This Act made available to the states Federal funds for vocational education below college level and set the precedent for subsequent vocational education legislation. To participate in the programs, the states had to create a state board for vocational education, prepare a state plan showing the programs they intended, make annual reports to the Federal Board and provide programs only in publicly supervised schools. The money was allocated on a ratio basis, state population in proportion to the total inhabitants of the United States.

In 1936 it again became apparent that major legislative action was necessary. This was accomplished through the George-Deen Act. This Act provided $14 million in perpetual appropriations for vocational education.

Distributive occupations received recognition with an appropriation of $1.2 million to be allocated to the various states on the basis of the total population ratio.

In 1940, Congress began making appropriations to the states for the training of war production workers. The first appropriation amounted to $15 million, and was increased year by year until the full amount exceeded $100 million annually. This program was discontinued in 1945.

The George-Barden Act was approved by Congress in 1946; it was actually an amendment to the George-Deen Act and superseded it by authorizing an increase in the annual appropriation from $14 million to $29 million.

In 1946, some of the funds for trade and industrial education were used for practical-nursing programs. By 1956, the Health Amendments Act was added to the George-Barden Act. This Act allocated $5 million annually for five years to be used specifically for practical-nursing programs. Another amendment to the George-Barden Act was Title VIII of the National Defense Act of 1958. The Act authorized $15 million annually to be expended in support of programs limited exclusively to the training of the highly skilled technicians.

In recent years, Congress has enacted other legislation that has resulted in new methods of Federal assistance in vocational education. One of these is Area Redevelopment Act of 1961, which recognizes the need for vocational training for the unemployed in economically depressed areas.

The Manpower Development and Training Act of 1962, authorizes $97 million the first year and $161 million the second and third years for training costs. In 1963, $20 million was appropriated under this Act for vocational education.

In 1963, Congress approved the Vocational Education Act of 1963. This is the most comprehensive vocational education program to become law in the history of our country. This law authorized a permanent program of Federal assistance for vocational education amounting to $108.5 million for fiscal year 1965; $177.5 million for fiscal year 1966; and $225 million for subsequent fiscal years. These authorizations are in addition to the $57 million appropriated annually under existing laws.

The individual state boards for vocational education are the agencies to administer the Federal funds allotted to the states. The new funds are not earmarked for specific occupational fields. They may be expended for vocational education programs to prepare people for employment in any occupational field not requiring a baccalaureate degree. The programs may be conducted in comprehensive or specialized high schools, area vocational schools, junior and community colleges, or universities that offer terminal vocational programs. Federal funds for vocational education allotted to the states will have to be matched on a 50-50 basis. States must guarantee that the federal funds will complement, but not replace local and state funds.

Each state and each community must study the whole field of vocational education and develop programs in keeping with their needs. The State's local communities that do the most to develop and improve vocational education will be those that will lead the nation in economic growth and opportunities in the coming decade. This paraphrases the rationale behind the survey of vocational education needs and potential employment of the vocational-technical trained in the Butte-Silver Bow Community.

PRESENT STATUS OF VOCATIONAL-TECHNICAL EDUCATION IN BUTTE

For the most part the vocational-technical education program in Butte is housed in three separate buildings: Cleveland School, Butte High School, and the United States Naval Reserve Armory. Silver Bow Community and St. James Hospitals house several classes as does the Berkeley Pit Mine garage of the Anaconda Company.

The Cleveland School, south of the city, was built in 1906 as a resident grade school. The basement area now being for classes in auto mechanics and welding, with garage facilities at each end. The other two floors housing carpentry, plumbing, electricity and an all-purpose shop area with appropriate tool cribs.

Butte High School holds a machine shop and teaching station for drafting, used by the vocational education department. Practical nursing is held in either of the two local hospitals: diesel mechanics in the heavy equipment garage at the mine.

The present vocational education programs consist of two separate divisions, (1) a day trade and industry program for high school students and (2) an adult education evening program. The day offerings are auto mechanics, welding, drafting, carpentry, plumbing, machine shop, and electricity. These courses carry high school credit and are conducted under the supervision of the State Trade and Industry of the Department of Public Instruction. The evening program offers similar courses with the addition of practical nursing, basic engineering, mathematics, higher level machine shop experiences and electronics. The same physical facilities are utilized during the evening as are used during the academic school day.

The total program is conducted through the regular school organization with the school board authorizing the use of facilities and approving budgetary items. The programs are administered by the Director of Vocational Education. He is assisted by the Vocational Education Advisory Committee representing local labor, industry, business and education interests. This group meets regularly to evaluate current programs and make recommendations to the Butte Board of Education on Vocational Education in general.

All programs are financed through local tax sources, Smith-Hughes, George-Barden and/or Title VIII of the National Defense Act funds.

INDUSTRIAL DEVELOPMENT AND EMPLOYMENT OF THE BUTTE-SILVER BOW COMMUNITY

Butte is known primarily as a mining city and mining is indeed its major industry, but it has other industries and businesses important to the economy of the total community. It is the purpose of this section to indicate the amount and type of industrial and business activity, the trend of such activity for the sake of showing potential of employment to the vocational-technically trained individual. According to the 1960 census, 15 percent of the State's labor force is employed in the Butte-Silber Bow Trade Area, which we have said is 10 percent of the total land area of this State.

The mining industry, which accounts for 20 percent of the area's 22,000 member labor force, is the greatest single employer. For the most part, mining activities are centered within Butte and Silver Bow County, although there is some mineral production in each of the other counties. Copper has been the principal metal produced in Montana since the 1880's, and throughout the years about 95 percent has come from the Butte district. In addition, Butte has yielded 85 percent of the State's zinc ores, Montana's second most important metal. The Butte-Philipsburg areas combined yield nearly 95 percent of all domestic manganese production in the United States. Montana Bureau of Mines and Geology, in its Summary of Montana Mineral Resources printed in 1959, indicates that Butte and its neighboring counties have many other resources, namely: silver, antimony, beryllium, bismuth, clay, corundum, flourite, gypsum, iron, limestone, mica, molybdenum, phosphate, sulphur and tungsten. Of the non-metallic minerals, phosphate rock is the most important. The Montana output of this mineral has doubled since 1950. It occurs in the trade area counties of Silver Bow, Madison, and Beaverhead.

Until 1952, ore in Butte was mined entirely on quartz vein structures by conventional methods in deep shafts. The Kelley Mine began operations in that year to carry out the Anaconda Company's Greater Butte Project. Underground block caving in this mine extracts low-grade ore in great quantities, at a comparatively low production cost. As a result, the copper costs less per pound than it does when mined by selective methods. The surface mining of low-grade ore in the Berkeley Open Pit began in 1955. When the ore is close to the surface, this open cut mining is the most economical method.

The present mining development extends over about 35 percent of the entire "Butte District", an area approximately eight miles long and four miles wide. Estimates have been made that the mines could operate at capacity for a century with the ore reserves known to be in the "Butte District". A magnetite iron ore deposit was only recently discovered near Dillon that has a reported 200 million tons of ore reserves. All of which points out that there will be mining in the Butte-Silver Bow Trade Area for some time to come, and mining related type occupations.

Service and finance employment is next in importance to mining in the six-county area, absorbing 19 percent of the labor force. The largest number of the workers employed in retail stores. Foodstores rank first in employment followed by eating and drinking establishments, lumber and hardware, furniture and automobiles. Sixteen percent of all retail sales in Montana were made in the Butte-Silver Bow Trade Area.

Trade occupations follow close behind mining and service and finance in the number of persons employed in the area, with slightly over 18 percent.

Manufacturing firms employ 14 percent of the areas workers; most of this industrial activity is centered in or near Anaconda, where 14 plants are located. Point of interest: average of three people live in a community for every industrial employee in the area. The trade, service and retail establishments that are opened to serve these people create 100 jobs for every job in basic industry, however, this works conversely also. Three industrial groups accounted for nearly 75 percent of the total manufacturing employment: food and kindred products; printing and allied products, and primary metals. The bulk of the workers in primary metals are situated in or near Anaconda, 63 percent of this type worker live in Deer Lodge County with five major industrial plants. Copper smelting and the production of phosphate fertilizer leading the list of the important industries there. Other industries are as follows: chemical, pole and post treatment, food processing, sheet metal, sheep shearing equipment, boiler, machinery and pressure regulator plants, dental supply laboratories and sign companies. A trailor factory also shows the attempt at some diversification.

Over 3.5 million acres, or nearly 37 percent of all the land in the Butte Trade Area is forested. These same timberlands represent one of the area's most valuable resources. Montana's lumber and wood products industries have increased in importance, and now rank as the state's leading manufacturing activity. In the trade area logging activity is increasing due mainly to the demand for power poles and pulpwood.

Agriculture employs over 11 percent of the labor force in the area, but is not as important to the Butte-Silver Bow community as it is in the

SURVEY OF PARENTS

Rationale

The instrument, SURVEY OF PARENTS (see Appendix A), was constructed to be administered to sets of parents. It is comprised of three parts with the father answering the questions posed in the first part, the mother providing responses in the second part and both parents supplying information independently for the items in Part III.

The impressions, experiences and opinions of parents are of particular importance for two reasons:

1) They influence to a great extent (more than any other single group) the planning and career development of their offspring. Statistics provided by the United States Department of Labor in their brochure entitled Manpower, Challenge of the 1960's indicated that it is young workers (under 25 years of age) who even now are accounting for nearly half of the labor force growth during the present decade. This will continue to be an age group that accounts for a major share of the changes in the working population. Thus parental attitudes will continue to be of extreme importance in determining the type and direction of training that the younger workers will seek out.

2) Parents represent collectively a potent portion of public opinion of a given area. The attitudes that parents have towards an area Vocational-Technical School will determine to a large extent, how it is received and how well it is supported.

Results

The SURVEY OF PARENTS was administered to a representative sample of some 280 households selected from the universe of households in the Greater Butte Area which contain at least one high school senior student. In most cases each household had both a father and a mother but not in all cases thus accounting for the discrepancy in N's (number responding) on some of the items shown below. These households represented all points along the occupational scale, from unskilled to professional workers. The households in this sample contained collectively 949 children ranging in age from infants to offspring who were over 18 years of age.

In general the wording of the questions presented in this section as with later sections are identical reproductions of the questions appearing on the original instrument. In those rare cases where the wording has been modified slightly, this was done to clarify the meaning for the reader so that he would not have to be continually referring to the original instrument. Distribution of responses is given for each item either in terms of percentages, (shown by the percentage sign) or as frequencies (when no sign is given). The term N denotes the number of subjects who gave responses.

Results of the SURVEY OF PARENTS, Parts I and II

The classification of responses from fathers and mothers as recorded on Parts I and II of the SURVEY OF PARENTS forms, collected by the interviewers in the Greater Butte Area, is given below:

Item: Is the work you are presently doing what you planned to do while you were still in school?

Response:

	Response Distribution		
	Fathers (N=159)	Mothers (N=99)	Both (N=258)
Exactly the same	13%	16%	14%
Closely related	20	20	20
Only slightly related	19	18	19
Not at all related	48	46	47

Item: If "Not at all related" or "Only slightly related" tell why you aren't doing the type of work that you originally preferred.

Response:

	Response Distribution		
	Fathers (N=72)	Mothers (N=31)	Both (N=103)
Injury or job accident	7%	0%	5%
Health	3	3	3
Marriage	1	23	8
Help at home	7	0	5
Financial	18	23	20
The depression	19	16	18
Military service interruption	14	0	10
Parental intervention	1	0	1
No such jobs available	7	9	8
Not enough education	17	23	18
Have retired	1	0	1
Changed preference with experience	1	3	1
Am in the process of preparation	1	0	1
Am in a job with better pay	1	0	1

Item: How long have you been employed on your present job(in months)?

Response:

	Response Distribution		
	Fathers (N=198)	Mothers (N=73)	Both (N=271)
1 month	5%	26%	10%
5 months	15	29	19
10 months	16	25	18
15 months	17	12	16
20 months or more	47	8	37

Item: What type of training did you receive for your present job?

Response:

	Response Distribution		
	Fathers (N = 184)	Mothers (N = 74)	(N = 258) Both
Apprenticeship	15%	11%	14%
On-the-job training	53	54	53
Special training by the company	10	9	10
Vocational-Technical school	6	4	5
College or Professional school	12	22	15
Military Service training	3	0	2

Item: How adequate was this training ?

Response:

	Response Distribution		
	Father (N=147)	Mother (N=72)	Both (N=219)
Very thorough	39%	33%	37%
Generally adeauate	48	53	50
Somewhat adequate	10	8	9
very inadequate	3	6	4

Item: List the number of times you have not worked for each length of time given:

Response:

	Response Distribution		
	Fathers (N=128)	Mother (N=53)	Both (N=181)
1 day to 1 month	26%	6%	20%
1 month to 3 months	32	36	33
3 months to 6 months	25	21	24
6 months to 1 year	11	15	12
More than 1 year	6	23	11

Item: What were the principal causes of your not working during these periods?

Response:

	Response Distribution		
	Fathers (N = 66)	Mothers (N = 20)	Both (N = 86)
Lay-offs and seasonal or Part time work	18%	40%	23%
Injury or job accident	15	5	13
Health	27	15	24
Marriage	0	5	1
Having children	0	35	8
Strike	32	0	24
Financial	1	0	1
No jobs available	5	0	3
Before job starts and after school ends	1	0	1

Item: Whom do you think the services of a Vocational-Technical program should be for?

Response:

	Response Distribution		
	Fathers (N=179)	Mothers (N=241)	Both (N=420)
High school students only	7%	4%	5%
High school graduates only	1	1	1
Anyone up to age 21	11	12	11
Anyone up to age 35	18	14	15
Anyone up to age 50	64	70	68

Item: Do you think that Vocational-Technical training should be restricted by sex:

Response:

	Fathers (N=177)	Mothers (N=240)	Both (N=417)
Males only	0%	0%	0%
Females only	0	0	0
Should be for all	100	100	100

Item: If training for a skilled technical or vocational job were available now, would be interested and able to take such training:

Response:

	Response Distribution		
	Fathers (N=165)	Mothers (N=237)	Both (N=402)
Definitely	18%	17%	17%
Probably	40	40	40
Doubtful	22	28	25
Definitely not	21	15	17

Item: Highest grade of school completed?

Response:

	Father (N=231)	Mother (N=245)	Both (N=476)
8 or less	39%	16%	27%
9, 10, or 11	17	21	19
High School graduate	25	42	34
Some college but not graduated	10	17	14
College graduate	4	4	4
Beyond 16th year	4	1	2

Item: List any courses taken during your school days that have helped you earn a living.

Response:

	Fathers (N=141)	Mothers (N=256)	Both (N=397)
Business	10%	7%	17%
Accounting	9	28	37
Clerical & Filing	1	7	8
IBM and Business Machines-	0	3	3
Law (incl Bus. Law)	3	1	4
Shorthand and Speed Writing	2	25	27
Stenography and Secretarial	2	9	11
Typing	11	59	70
Marketing and Retail Sales	1	1	2
English	14	23	37
Spelling	0	1	1
Public Speaking	0	2	2
Languages	1	0	1
French	0	1	1
Latin	1	2	3
Chinese	1	0	1
Engineering	1	0	1
Mechanical	1	0	1
Music	1	1	2
Art	1	1	2
Industrial Arts	5	1	6
Mechanic-Machinist-	5	0	5

Item: Number of training programs completed in a Vocational-Technical program.

Response:

	Frequency		
	Fathers (N=22)	Mothers (N=36)	Both (N=58)
One program	13%	29%	42%
Two programs	3	6	9
Three programs	1	1	2
Four programs	5	0	5

Item: List the types of programs completed in a Vocational-Technical program that have been helpful in earning a living.

Response:

	Frequency		
	Fathers (N=30)	Mothers (N=32)	Both (N=62)
Business	0%	1%	1%
Accounting	1	4	5
IBM and Business Machines	1	2	3
Law (incl Bus. Law)	0	1	1
Shorthand and Speed writing	0	1	1
Stenography and Secretarial	0	1	1
Typing	1	7	8
Engineering	1	0	1
English	1	1	2
Letter Writing	1	0	1
Public Speaking	1	0	1
Industrial Arts			
Electricity	2	1	3

(continued)

	Frequency		
	Fathers	Mothers	Both
Welding & Blacksmithing	2	0	2
Wood Working (Carpentry)	2	0	2
Auto Body Repair	1	0	1
Mechanical Drawing and Blueprint reading	6	1	7
Machine Shop Practice	5	0	5
Natural Sciences	6	12	18
Biology	1	2	3
Home Economics	0	25	25
Physical Science	5	1	6
Chemistry	0	2	2
Math	38	31	69
Physics	2	0	2
Surveying	1	0	1
Social Studies	1	0	1
Sociology	1	0	1
Technical Training			
Beautician	0	1	1
Electronics	1	0	1
Nurse or Nurse's Aide	0	7	7
Insurance	0	1	1

Item: Number of correspondence courses taken since your school days.

Response:

	Frequency		
	Fathers (N=32)	Mothers (N=9)	Both (N=41)
	0%	0%	0%

Item: List any of the correspondence courses that have helped you earn a living.

Response:

	Frequency		
	Fathers (N=21)	Mothers (N=8)	Both (N=29)
Business	0%	1%	1%
Accounting	7	1	8
Shorthand	1	0	1
Stenography	1	1	2
Typing	0	1	1
Marketing and Retail Sales			
Management	0	1	1
Engineering	1	0	1
Art	1	0	1
English	0	1	1
Literature	0	1	1
Industrial Arts	0	0	0
Electricity	1	0	1
Mathematics	1	0	1
Social Studies			
History	1	0	1

(continued)

	Frequency		
	Fathers (N=21)	Mothe rs (N=8)	Both (N=29)
Technical Training			
Electronics Communication	2	0	2
Nurse or nurse's aide	0	1	1
Driver training	3	0	3
Insurance	1	0	1

Item: Number of months spent in the military services:

Response:

	Frequency		
	Fathers (N=233)	Mothers (N=248)	Both (N=481)
None	117	243	360
12 or less, but at least one	5	0	5
24 or less, but at least thirteen	20	1	21
36 or less, but at least 25	39	2	41
48 or less, but at least 37	32	2	34
49 or more	20	0	20

Item: List any training received furing military service that has been helpful in earning a living:

Response:

	Frequency		
	Fathers (N=44)	Mothers (N=0)	Both (N=44)
Business			
Clerical & Filing	1%		1%
IBM & Business machines	1		1

(continued)	Frequency Fathers (N=44)	 Mothers (n= 0)	 Both (N=44)
Law (incl business law)	1		1
Marketing & Retail Sales	1		1
Engineering	2		2
English			
Journalism	1		1
Public Speaking	1		1
Library and speed reading	1		1
Industrial Arts			
Electricity	6		6
Mechanic-machinist	11		11
Machine shop practice	3		3
Auto body repair	1		1
Leadership training	1		1
Natural Sciences			
Food service (home ec)	2		2
Medical and related	1		1
Mathematics	1		1
Technical Training			
Domestic	1		1
Dental Technician	1		1
Electronics	5		5
Driver Training	2		2

(continued

	Fathers (N=30)	Mothers (N=32)	Both (N=62)
Mechanic-Machinist	2%	1%	3%
Welding & Blacksmithing	9	1	10
Wood Working (Carpentry)	2	0	2
Auto Body Repair	2	0	2
Mechanical Drawing and Blueprint reading	1	0	1
Machine ShopPractice	1	0	1
Home Economics and Food Service	1	5	6
Physical Sciences			
Geology	1	0	1
Social Studies			
Sociology	0	1	1
Technical Training			
Beautician	0	1	1
Electronics	2	0	2
Nurse or Nurse's aide	0	4	4

Results of the SURVEY OF PARENTS, Part III

The results of the administration of Part III, "Information about Your Child", of the SURVEY OF PARENTS in the Greater Butte Area is given below:

Item: What specific jobs is your child thinking about after leaving school?

Response: (N = 339)

Category	Number of Choices	Most mentioned Specific Jobs
Professional, Technical and Managerial	181	Engineer Forester Nurse Secondary Teacher Elementary Teacher
Clerical and Sales Occupations	34	Secretary Office Clerk
Service Occupations	23	Beautician
Farming, Fishery and Forestry Occupations	3	
Processing Occupations	1	
Machine Trades Occupations	23	Machinist-mechanic
Bench Work Occupations	2	
Structural Work Occupations	18	Electrician
Miscellaneous Occupations	5	

Item: How do you feel about your child's choices?

Response: (N = 234)

Excellent	47%
Good	44
Fair	8
Poor	1

Item: List any vocational classes that your child is planning to take in high school.

Response: (N = 242)

Art	1
Business	7
Accounting	10
Clerical & Filing	2
IBM and Business Machines	13
Law (incl Bus. Law)	4
Shorthand and Speed Writing	20
Stenography and Secretarial	3
Typing	90
English	1
Journalism	2
Library and Speed Reading	1
Industrial Arts	1
Mechanic-Machinist	8
Welding & Blacksmithing	2

(continued)

Class	Number of times Listed
Wood Working (Carpentry)	14
Auto Body Repair	13
Mechanical Drawing and Blueprint Reading	13
Machine Shop Practice	14
Natural Sciences	2
Home Economics	11
Mathematics	6
Physical Sciences	
Chemistry	1
Social Studies	
History	1
Technical Training	
Electronics Communications	2

Item: Do you feel the high school is offering enough vocational classes?

Response: (N = 267)

Distribution of Responses	
Definitely	5%
Probably	15
Doubtful	24
Definitely Not	56

Item: If additional vocational classes were offered would you encourage your child to enroll in some of them?

Response: (N = 266)

Definitely	72%
Probably	21
Doubtful	5
Definitely Not	0

Item: What specific vocational classes would you feel should be offered to high school students?

Response: (N = 849)

Class	Number of times Listed
Art	8
Business	15
Accounting	27
Clerical & Filing	19
IBM & Business Machines	98
Law (incl Bus. Law)	1
Shorthand and Speed Writing	6
Stenography and Secretarial	33
Typing	5
Marketing and Retail Sales Trades and Industries	31
Management	11
Engineering	1
Civil Engineering	21
Mechanical Engineering	1

(continued)

Class	Number of times Listed
English	
Public Speaking, Speech, Public Relations	21
Library and Speed Reading	2
Industrial Arts	1
Electricity	43
Mechanic-Machinist	64
Plumbing & Pipe Fitting	11
Wood Working (Carpentry)	47
Auto Body Repair	82
Mechanical Drawing and Blueprint Reading	13
Painting	3
Machine Shop Practice	4
Languages	2
Mathematics	4
Natural Sciences	1
Home Exonomics	39
Forestry	1
Medical or Pre-Med	1
Physical Sciences	1
Computer Tech	18
Technical Training	3
Beautician	10
Domestic	8
Dental Tech	21

(continued)

Class	Number of times Listed
Electronics Communication	55
Medical Tech	22
Nurse's aide	64
X-Ray Tech	3
Driver Training	4

Item: Do you feel that vocational classes in high school for most students are worthwhile?

Response: (N = 268)

Distribution of Responses	
Definitely	84%
Probably	15
Doubtful	0
Definitely Not	1

Item: If vocational classes or training were available on a post-high school level, would you encourage your child to enroll?

Response: (N= 260)

Distribution of Responses	
Definitely	74%
Probably	19
Doubtful	5
Definitely Not	2

Item: Would you like to see the schools give your child more information on the many occupations there are and how to get the necessary training for each one?

Response: (N = 268)

Distribution of Responses	
Definitely	93%
Probably	7
Doubtful	0
Definitely Not	0

Item: Would you like to see the schools offer more extensive testing and hold conferences with you and your child to explain the vocational meanings?

Response: (N = 265)

Distribution of Responses	
Definitely	76%
Probably	18
Doubtful	5
Definitely Not	1

Item: Do you feel the counselor at school gives you and your child as much information and attention as you need to make wise vocational decisions about your child's future?

Response: (N = 255)

Distribution of Responses	
Definitely	16%
Probably	18
Doubtful	23
Definitely Not	44

Discussion

Observations made here and in subsequent sections discussing the results and implications of those results will be largely restricted to those that impinge upon the need for an Area Vocational-Technical School in Butte, Montana. The surveys divulged a wealth of information that has implications in the search for a comprehensive vocational development theory, for comparative studies of different adolescent populations, for comparative studies of parents choices of careers for their offspring as opposed to the choices of the offspring themselves, and for a number of other topics. However, since these are beyond the scope of this report in terms of its present purpose they will not be discussed here. Suffice to say that the surveys conducted have implications beyond validating area vocational needs.

Endorsement by parents of the need for additional vocational classes and technical vocational training is perhaps most clearly seen in their responses to two questions posed in the survey.

> The first question reads, "If additional vocational classes were offered, would you encourage your child to enroll in some of them?" Seventy-two (72) percent of the parents in this representative sample responded by saying they would _definitely_ encourage their children to enroll, and another _twenty-one_ (21) percent said they _probably_ would encourage their children to enroll.
>
> The second question of significance read, "If vocational classes or training were available on a post high-school level, would you encourage your child to enroll?" Seventy-one (71) percent of this group of parents indicated they would definitely encourage their children to enroll, and another eighteen (18) percent indicated they would _probably_ encourage their children to enroll.

The attitudes of the parents involved in these cases is clear. Their responses indicate that they would actively promote involvement of their own children in vocational-technical training programs, at both the high-school and post high-school level, if these programs were available.

Perhaps, of equal significance, is the fact that eighteen per cent of the fathers and seventeen per cent of the mothers indicated that, if training for a skilled technical or vocational job were available now, they would be definitely interested and able to take such training. Another 40 percent of both fathers and mothers indicated they would probably be interested and able to take such training. This group of parents further indicated that they felt the services of a vocational-technical program should be available for anyone, not just high school students or high school graduates--and, further, that it should be available to both males and females.

Among the specific jobs that these parents perceive their children should be thinking about, in terms of future planning, were many that require vocational-technical training. The most mentioned of such occupations were electronic technicians, draftsmen, radio engineers, radio technicians, practical nurses, nurses aides, secretaries (or related), beauticians, precision machinists, pattern makers, mechanics of various types, auto body workers, partsmen, electricians and sign painting. Along these lines, seventy-eight per cent of the parents felt that the high school is not offering enough vocational classes. When asked to cite specific classes that they feel should be offered to high school students, parents most often mentioned courses in IBM and Business Machine Accounting, Secretarial Work and Stenography, BusinessCourses relating to Trades and Industries, Courses in Speech and Communication , Electricity, Skilled Courses for Mechanics and Machinists, Welding, Mechanical Drawing, Blue Print Reading, Woodworking, Carpentry, Auto Body Repair, Interior Decorating, Technical Training for Dental Technicians, various Electronic Occupations, Communications Occupations and courses that would train nurses aides.

Additional information which may be of value, which was collected in this, the Survey of Parents, is as follows:

1) The majority of respondents are themselves today presently employed in occupations that are not at all related, or only slightly related, to work that they had planned to do while they were still in school. Among the reasons they gave for not doing the type of work they had originally preferred, one of the most mentioned was lack of training or not enough education. This perhaps explains their overwhelming support for courses and training programs of a vocational-technical nature, that should be available not only to the young workers--the offspring of these parents--but even to the parents themselves.

2) Of the total group of parents used in this study, forty-three per cent have themselves attained less than a high school education. This segment of the sample reported more than its share of layoffs, periods of unemployment, injury or job accidents and poor health. They also report for themselves fewer than the average advancements, compared with the total group..

   This first-hand experience, with what generally is regarded as being undesirable conditions of living, seems to have only increased the respect of this segment of the sample, holds for vocational and technical training, and advanced education. Indications are clear that they recognize the desirability of this training and wish to secure not only for their children and the younger workers of the society but also, in some instances, for themselves.

3) The results of the Survey of Parents indicate that in an area of Vocational-Technical Training School, there would be a need for vocational guidance and counseling activities. More specifically, the parents were asked their opinion in regard to three aspects of counseling and guidance activities in schools, with their responses being recorded on a four-point scale, ranging from "definitely" to "probably" to "doubtful" to "definitely not."

   In regard to the question "Would you like to see the schools give your child more information on the many different occupations there are and how to get the necessary training for each one?" ninety-three percent of the parents responded "definitely." The other seven per cent responded "probably." There were no responses of "doubtful" or "definitely not."

   The second question, "Would like to see the schools offer more extensive testing and hold conferences with you and your child, to explain the vocational meanings?" the

> responses show seventy-six per cent in the "definitely" category; eighteen percent in the "probably" category; and five per cent as "doubtful" and only one per cent of the responses were "definitely not" category.
>
> The third and final question posed in this area was "Do you feel a school counselor gives you and your child as much information and attention as you need to make wise vocational decisions about your child's future?" The responses patterned themselves as follows: sixteen per cent answered "definitely"; eighteen per cent "probably"; twenty-three per cent "doubtful"; and forty-four per cent said "definitely not".
>
> Parents then feel that counselors and guidance workers should be available, and that they should be devoting much more time than they are to the dispensing of occupational and vocational information and to the administration and interpretation of tests in terms of vocational meanings of the results. Logically, this would mean parents expect a Vocational-Technical School to offer these services.

In summary, the most obvious single general conclusion borne out by the facts of this survey is that there is deep and wide-spread support among parents in the area of vocational-technical training opportunities. These were reflected not only in the parents wish for such opportunities for their offspring, but also in expressions that they themselves would take advantage of these opportunities, were they available.

Parents further expressed the opinion that such opportunity should be available and that they should be available to men and women without age restriction.

YOUTH SURVEY

Rationale

The instrument, YOUTH SURVEY FORM, (see Appendix B) was constructed to be administered to high school seniors. It was designed to secure information on attitudes toward jobs, career planning, recognized sources of information and aid in vocational development and career aspirations of these subjects.

The picture of the vocational-technical needs in the Greater Butte Area would not be complete without the information relative to the planning, interests and aspirations of high school age youths since this age group comprises the largest segment of the pool of available trainees in a vocational-technical program.

Results

The YOUTH SURVEY FORM was administered to a representative sample totaling 329 youth in the Greater Butte Area. The results are shown below:

Item: Do you plan at this time to graduate from high school?

Response: (N=282)

Distribution of Responses

Definitely	95%
Probably	2
Doubtful	2
Definitely Not	1

Item: After leaving high school, what do you think you would most like to do?

Response: (N = 280)

Distribution of Responses

Take a temporary job and wait for Something better	5%
Take an available permanent job	6
Take training for a trade or skilled occupation in a school	14
Enter an apprenticeship program	5
Go to college	67
Other (military service, travel)	3

Item: If you answered that you would prefer to "Go to college", where would you like to go?

Response: (N = 150)

Distribution of Responses

No decision	25%
MontanaTech	22
Montana State University	13
University of Montana	9
Carroll College	7
Other Montana Colleges	9
Out-of-state Colleges	15

Item: Have you reached a decision about a life's career?

Response: (N = 249)

Distribution of Responses

Yes	74%
No	26

Item: If you have reached a decision about a life's career, when was the decision reached?

Response: (N = 184)

It was made very recently	24%
About a year ago	36
About two years ago	21
About three years ago	12
More than three years ago	7

Item: Identify in the order of importance to you the three things to be considered in choosing a career for yourself.

Response: Factor

Distribution of Responses

	First Choice (N=197)	Second Choice (N=194)	Third Choice (N=189)	Total Selected as one of the Subjects' choices
Salary	11%	23%	31&	65%
Working Conditions	9	19	16	44
Hours	1	2	6	9
Chances for Advancement	16	18	14	48

(continued)	Distribution of Responses			
	First Choice (N=197)	Second Choice (N=194)	Third Choice (N=189)	Total (selected as one of the subject' choices)
Security (regular employment)	25%	11%	14%	50%
Prestige	0	2	2	4
Work is likely to be interesting	29	17	12	58
Type of people who do the work	3	8	5	16
Other (helping others, what is accomplished, own qualifications)	6	1	0	7

Item: Identify three persons who have been most helpful to you in the process of considering an occupational choice and in planning for that choice. Make your selections in the order of their importance.

Response:

Distribution of Responses

Person	First Choice (N=195)	Second Choice (N=182)	Third Choice (N=171)	Total (selected as one of the subjects' three choices)
Parents	48%	31%	10%-	89%
Teachers	17	27	25	69
Counselor	10	17	13	40
Friends	6	18	29	53
Employer	1	2	6	9
Library Information	4	2	9	15
Other (decided by self, relatives, accumulation of sources	14	4	7	25

Item: If you had all the qualifications to fill any job, what three types of work (in the order of your preferences) would you choose for a life's career?

Response: Distribution of Responses

Category	First Choice (N=185)	Second Choice (N=177)	Third Choice (N=127)	Most mentioned Specific Jobs
Professional, Technical and Managerial Occupations	79%	58%	58%	Doctor, Nurse, Engineer, Teacher and Lawyer
Clerical and Sales Occupations	9	9	11	Secretary and Bookkeeper
Service Occupations	3	6	7	Beautician Airline Stewardess
Farming, Fishery and Forestry	0	0	2	
Processing Occupations	0	1	0	
Machine Trades Occupations	1	7	3	Machinist
Bench Work Occupations	1	3	2	Carpenter
Structural Work Occupations	6	4	15	Miner, Road construction worker, Electrician
Miscellaneous Occupations	1	3	3	

Item: What type of work do you actually expect to enter?

Response: (N = 202)

Category	Distribution of Choices	Most Mentioned Specific Occupations
Professional, technical and Managerial Occupations	68%	Nurse, Teacher, Engineering, Forester,
Clerical and Sales Occupations	10	Secretary
Service Occupations	6	Beautician
Farming, Fishery and Forestry Occupations	0	

(continued)

Category	Distribution of Choices	Most mentioned specific occupations
Processing Occupations	1	
Machine Trades Occupations	6	Machinist, Mechanic
Bench Work Occupations	1	
Structural Work Occupations	7	Miner, Auto body repair, Electrician
Miscellaneous Occupations	1	

Item: How sure are you that this is the type of work you will actually do for a career?

Response: (N = 203

Distribution of Responses	
Very definite	19%
Fairly sure	60
Somewhat indefinite	19
Very indefinite	2

Item: If you were forced to quit school and get a job right now, what are three jobs (in order of preference that you would like to have?

Response:

Distribution of Responses

Category	First Choice (N=259)	Second Choice (N=212)	Third Choice (N=143)	Most mentioned Specific Occupations
Professional, Technical and Managerial Occupations	10%	8%	6%	Forestry
Clerical and Sales Occupations	33	33	27	Secretary and Bookkeeper
Service Occupations	17	16	22	Retail Sales, Grocery Clerk, Waitress, Nurse's aide
Farming, Fishery and Forestry Occupations	2	1	2	
Processing occupations	1	1	1	
Machine Trades Occupations	11	7	4	Mechanic
Bench Work Occupations	2	3	1	
Structural Work Occupations	18	15	20	Auto body repair, Miner
Miscellaneous Occupations	7	16	17	Gas station attendant

Item: If you were forced to quit school and get a job right now what job would you actually expect to get;

Response: (N = 235)

Category	Distribution of Choices	Most mentioned Specific Jobs
Professional, Technical and Managerial Occupations	4%	
Clerical and Sales Occupations	24	Sales Lady, Salesman, General clerk,

(continued)

Category	Distribution of Choices	Most mentioned Specific Occupations
Service Occupations	29%	Babysitter, Waitress, Nurse's aide
Farming, Fishery and Forestry Occupations	2	
Processing Occupations	0	
Machine Trades Occupations	6	
Bench Work Occupations	1	
Structural Work Occupations	14	Miner
Miscellaneous Occupations	20	Gas station attendant Box boy

Item: Looking back on the time you have spent in high school would you say that the time spent has been worthwhile?

Response: (N=258)

Distribution of Responses	
Very Worthwhile	52%
Generally worthwhile	40
Slightly worthwhile	6
Not at all worthwhile	2%

Item: Looking back on the time you have spent in high school would you say that the time spent has been pleasant?

Response: (N=258)

Distribution of Responses	
Very pleasant	26%
Generally pleasant	64
Somewhat unpleasant	10
Very unpleasant	1

Item: To what extent have persons in the high school helped you in selecting school courses which are in keeping with your future career plans?

Response: (N=258)

Distribution of Responses	
Very helpful	24%
Moderately helpful	43
Slightly helpful	22
No help at all	11

Item: List any courses of a practical nature that you have taken or are planning to take which you see as helpful in securing a job if you were to quit school now.

Response: (N=587)

Class	Frequency
Art	3
Business	17
Accounting	26
Clerical & Filing	4
IBM and Business Machines	16
Law (incl Business Law)	5
Shorthand and Speed Writing	26
Stenography and Secretarial	4
Typing	103
Engineering	3
English	72
Journalism	1
Public Speaking	9
Library & Speed Reading	1

(continued)

Class	Frequency
Industrial Arts	4
Electricity	1
Mechanic-Machinist	8
Welding & Blacksmithing	4
Wood Working (Carpentry)	32
Auto Body Repair	16
Mechanical Drawing and Blueprint Reading	19
Machine Shop Practice	26
Sign Printing and Painting	1
Languages	4
French	1
Spanish	1
Mathematics	93
Music	1
Natural Science	21
Biology	4
Home Economics, Interior Decorating, Health and Inst Food Services	17
Forestry Experience or Survey	2
Range Management	1
Physical Science	4
Chemistry	2
Physics	3
Social Studies	
Economics	2

(continued)

History	5
Sociology	5
Technical Training	
Domestic	1
Electronics Communications	1

Item: List any course of a practical nature that you have taken or are planning to take which you feel will be helpful in terms of your career plans.

Response: (N=482)

Class	Frequency
Art	1
Business	11
Accounting	15
IBM and Business Machines	9
Law (incl Business Law)	5
Shorthand and Speed Writing	15
Stenography and Secretarial	4
Typing	49
Management	1
Engineering	2
Civil	1
English	48
Journalism	5
Public Speaking	9
Creative Writing	2
Library and Speed Reading	1

(continued) Class	Frequency
Industrial Arts	
Mechanic-Machinist	6
Welding and Blacksmithing	2
Wood Working (Carpentry)	11
Auto Body Repair	13
Mechanical Drawing & Blueprint Reading	13
Machine Shop Practice	13
Languages	12
French	3
Latin	5
Russian	1
Spanish	1
Mathematics	90
Natural Science	22
Biology	13
Home Economics Health & Inst Food Services Interior Decorating	6
Range Management	1
Physical Science	13
Chemistry	17
Computer Tech	1
Physics	11
Social studies	
Economics	2
History	26
Political Science	1
Sociology	13

(continued)

Technical Training	
Beautician	1
Dental Technician	1
Electronics Communications	2
Nurse or Nurse's Aide	1

Item : What courses of a practical nature would you like to see offered in high school?

Response: (N = 886)

Art	2
Business	12
Accounting	29
Clerical & Filing	10
IBM and Business Machines	79
Law (incl Business Law)	2
Shorthand and Speed Writing	5
Stenography and Secretarial	44
Typing	4
Marketing and Retail Sales Trades and Industries	24
Management	26
Engineering	3
Civil	14
English	3
Journalism	2

(continued)

Class	Frequency
Public Speaking	28
Speech and Communication	
Public Relations	
Creative Writing	2
Library & Speed Reading	1
Literature	1
Industrial Arts	2
Electricity	36
Mechanic-Machinist	51
Plumbing - Pipe Fitting	6
Welding & Blacksmithing	38
Wood Working (Carpentry)	43
Auto Body Repair	73
Mechanical Drawing and Blueprint Reading	27
Machine Shop Practice	10
Languages	1
Italian	1
Chinese	1
Mathematics	7
Natural Science	2
Biology	1
Home Economics, Interior Decorating, Health & Inst Food Services	39
Pre-med Training	2
Physical Science	1
Computer Technology	35

(continued)

Class	Frequency
Physics	1
Social Studies	
Economics	1
History	1
Psychology	4
Technical Training	6
Beautician	10
Domestic	15
Dental Technician	21
Electronics Communications	52
Medical Technician	40
Nurse or Nurse's aide	59
X-Ray Technician	3

Item: Would you like to see the school give you more information on the many different occupations that there are and how to get the training for each one?

Response: (N = 283)

Distribution of Responses	
Definitely	89%
Probably	8
Doubtful	2
Definitely Not	0

Item: Would you like to see the school offer more extensive testing and hold more conferences with you to explain the results of the tests and the meanings that the test results have in terms of career planning?

Response: (N = 285)

Distribution of Responses

Definitely	72%
Probably	22
Doutbul	4
Definitely Not	2

Item: Do you feel the guidance counselor at your school gives you as much information and attention as you need from him in order for you to make wise vocational decisions about your future:

Response: (N=268)

Definitely	26%
Probably	25
Doubtful	17
Definitely Not	32

Discussion

Ninety-five per cent of those polled answered that they definitely planned to graduate from high school. Only one per cent answered that they definitely did not plan to graduate from high school. Most of these students felt that after leaving high school, they would attend college; however, 14 per cent of those polled felt they would take training for a trade or skilled occupation in a school. Another five per cent felt they would enter some sort of apprenticeship program. A part of the survey was an investigation of the vocational preferences of the subjects involved. This had several demensions to it. First, the vocational choices the subjects would make if they had the qualifications to fill any job were tapped. They were then asked what type of work they actually expected to enter. Third, they were asked the situational question, if they were forced to quit school and get a job right now what preference would they have. And fourth and finally, they were asked if they were forced to get a job right now what would they actually expect to do.

Results

Results of these items in the same order in which they were named are as follows: In hypothizing that they would have all of the qualifications to fill any job, the majority of selections tended to be of occupations that would be classified as professional or managerial. However, there were many jobs selected that would require vocational-technical training. These were jobs such as teamster, electrician, sign painter, auto body man, diesel mechanic, printer, carpenter, automobile mechanic, machinist, airline stewardess, beautician, stenographer, bookkeeper, key punch operator, secretary, copy writer, dental assistant, medical technician, draftsman and radio technician. Responses of the subjects when they were asked to be more realistic and answer in terms of what they actually expected to enter vocationally were fewer selections of professional and managerial occupations; and thus, more occupations were named that would require vocational-technical training for entry. Approximately 65 percent of the responses were of professional and managerial occupations. The other 35 percent were of occupations and jobs that would require vocational-technical training. Compared to national averages for similar age groups, this would indicate somewhat higher interest occupations requiring vocational-technical training as required as necessary for entry than for most other groups studied. Roughly 80 percent of the subjects in this study indicated that they were confident that the type of work they had cited would be the type of work they would actually enter for a career.

Turning now to the other dimension of vocational preferences among this group, we find a wide variety of occupations and jobs were named by the subjects when they were asked if they were forced to quit school and get a job right away what would they like to do. Some 59 percent separate and distinct occupations were identified by the total group. The responses indicate that many of the youth involved in the survey are unaware of the necessity of obtaining training, education, or licensing of one type or another in order to enter various jobs, because among the responses were such things as medical technician, secondary school teacher, elementary school teacher, interior decorator, and a multitude of occupations that require vocational-technical training such as teamster, truck driver, cab driver, plumber, carpenter, appliance service man, electrician, electrical technician, cement mason, welder, auto body man, upholsterer, carpenter, cabinet maker, machinist, diesel mechanic, baker, heavy equipment operator, beautician, bookkeeper, stenographer, draftsman, radio technician and various data processing jobs. Again the subjects were more realistic when they were asked what they actually would expect to enter if they were forced to quit school and get a job at the present time.

The apparent ignorance of the requirement of training and background for many jobs indicates that there is a great need for distribution of occupational-vocational information both in areas of professional occupations and in areas of vocational-technical skilled and semi-skilled occupations. Some of the expressed values that were operating among this group as they made their vocational choices were tapped through a series of questions which allowed the individual to place in the priority list those factors they felt most important in considering and choosing a career for themselves.

By far the most important single factor in the eyes of the subjects was salary. Sixty-five per cent of the youths listed this as one of the three most important items to consider when choosing a career for themselves. This was followed in order by work must be interesting, regular employment or security, good chance for advancement, and good working conditions.

These subjects were asked to identify the person or persons who had been most helpful to them in the process of considering an occupational choice and helping them plan for that choice. The responses show in a rather clear-cut way that this group considers their parents to be far-and-away the most helpful of the possible sources of information and help. Eighty-nine per cent of the subjects in this survey identified parents as being one of the three most helpful persons. Following parents, teachers of the students were identified as the next most helpful group. Friends and school counselors were identified as being helpful by at least 40 per cent of the subjects as one of their three choices.

In regard to decisions about their life's career, the majority of the subjects indicated that they had reached a decision which they felt they would pursue. The largest segment of those who had reached a decision indicated they had made the decision within the last year. Some reaction of the subjects to their high school experiences show that the vast majority consider their high school days to have been worthwhile and also, the overwhelming majority felt that the time spent in high school had been very pleasant. However, approximately one-third of the subjects indicated that persons in the high school had been only slightly or not at all helpful in selecting school courses which were in keeping with their future career plan. When asked to list any courses of a practical nature that they either had taken or were planning to take which they see as helpful in securing a job if they were to quit school now, the subjects of this study listed many, many courses. The most mentioned were the usual typing, English, accounting, IBM amd business machines, shorthand, carpentry, auto body repair, mechanical drawing, machine shop, natural sciences, home economics, and various mathematics courses. Also, many of these same courses were listed when the subjects were asked to enumerate courses of a practical nature that they had taken or plan to take which would be helpful in terms of their career plan. Among the most mentioned in this category were also, typing, shorthand, accounting, business, English, carpentry, auto body repair, mechanical drawing, languages, natural sciences including biology, physical sciences including chemistry, various mathematics courses, various history courses, and sociology; and courses that members of the survey group would liked to have taken had they been offered in high school were such things as additional IBM and business machine courses, clerical filing, stenography, marketing, management, public relations, electricity, automobile mechanics, precision machinist, welding, wood working and carpentry, auto body repair, mechanical drawing, blueprint reading, interior decorating, computer technology, courses for dental technician, beautician, electronics, courses for medical technician, and courses for the training for nurses aide. The obvious need among the subjects for more occupational information and more planning is plainly seen as we analyze responses to three questions. Approximately 90 per cent of the students felt quite definitely that they were not getting enough information on the many different occupations that there are nor on how to get training for each one. Almost three quarters of this group expressed that they would definitely like to see the school offer more extensive testing and they would like the results of these tests to be explained to them in individual conferences and meanings of the tests results interpreted in terms of career planning. Finally, approximately one-half of the students were quite doubtful that the guidance counselor with whom they had contact had to this point given them enough information and attention in terms of helping them in their struggle to make a wise vocational decision. In conclusion then, the implications of the results of the youth survey form as applied to a representative sample of nearly 300 high school senior boys and girls in the Greater Butte Area are rather clear cut. Compared to the results procured from the running of similar surveys for vocational guidance purposes in other parts of the country, a larger percentage of the subjects in this study indicated that they are seriously considering occupations and jobs in the future that require vocational-technical training. This in itself spells out a need for a concentrated effort on the part of institutions and agencies in the Greater Butte Area to provide such training for its citizens, especially those young workers preparing for entries whose work lives stretch before them for years and years. The conservation of human resource is widely recognized as being important; and one of the chief aspects of this is that if its young workers are trained, skilled, and educated in early life their total contributions during their work lives will enhance the society--enhance the nation tremendously.

The second major implication of the results of this particular portion of the total survey study is that many of the occupations and jobs cited by young people as being those that they either will choose or would hope to choose if they were available are occupations and jobs, skilled trades and semi-skilled vocations for which there are at the present no training facilities in the Greater Butte Area. These can be provided and should be provided in terms of a need as expressed by youth which has been one of the more important segments of the potential populations for which training would be available. Justification then, for an area vocational-technical training center is strongly reinforced in the area surveyed by the results of this, the Youth Survey.

NEIGHBORHOOD YOUTH CORPS SURVEY

Rationale

The same instrument which was used with high school seniors in the Greater Butte Area, the YOUTH SURVEY FORM (see Appendix B), was also administered to the enrollees of the local Neighborhood Youth Corps Center was not only to make an assessment of career development factors among this population but also to provide information which might be useful in drawing comparisons and contrasts between the more typical choices and vocational perceptions of the high school youth and those of a unique group of high school dropouts now residing in the same geographical area.

Results

The YOUTH SURVEY FORM was administered to a total of 81 Neighborhood Youth Corps members. The outcome of these administrations are given below:

Item: Do you plan at this time to graduate from high school?

Response: (N = 81)

	Distribution of Responses
Definitely	80%
Probably	9
Doubtful	7
Definitely Not	4

Item: After leaving high school, what do you think you would most like to do?

Response: (N = 79)

Distribution of Responses	
Take a temporary job and wait for something better	9%
Take an available permanent job	10
Take training for a trade or skilled occupation in a school	15
Enter an apprenticeship program	14
Go to college	49
Other (military service)	3

Item: If you answered that you would prefer to "Go to college", where would you like to go?

Response: (N=35)

Distribution of Responses	
No decision	31%
Montana State University	23
Montana Tech	15
Western MontanaCollege	9
University of Montana	6
Other Montana Colleges	9
Out of State Colleges	7

Item: Have you reached a decision about a life's career?

Response: (N = 78)

Distribution of Responses	
Yes	67%
No	33

Item: If you have reached a decision about a life's career, when was the decision reached?

Response: (N = 58)

Distribution of Responses	
It was made very recently	31%
About a year ago	41
About two years ago	16
About three years ago	7
More than three years ago	5

Item: Identify in the order of importance to you the three things to be considered in choosing a career for yourself.

Response: Factor

Distribution of Responses

	First Choice (N=67)	Second Choice (N=66)	Third Choice (N=66)	Total (selected As one of the Subjects' choices)
Salary	21%	33%	27%	81%
Working Conditions	3	17	9	29
Hours	0	5	6	11
Chances for Advancement	18	21	11	50
Security (regular employment	31	6	24	61

(continued)

	First Choice (N=67)	Second Choice (N=66)	Third Choice (N=66)	Total (selected as one of the Subjects' choices)
Prestige	0	2	0	2
Work is likely to be interesting	25	12	15	25
Type of people who do the work	0	4	8	12
Other	1	0	0	1

Item: Identify three persons who have been most helpful to you in the process of considering an occupational choice and in planning for that choice. Make your selections in the order of their importance.

Response:

Distribution of Responses

Person	First Choice (N=68)	Second Choice (N=66)	Third Choice (N=65)	Total (selected as one of the Subjects' choices)
Parents	49%	36%	6%	91%
Teachers	9	24	23	56
Counselor	28	17	15	60
Employer	1	9	15	25
Friends	6	14	29	49
Library Information	0	0	5	5
Other (relatives, decided by self)	7	0	6	13

Item: If you had all the qualifications to fill any job, what three types of work (in the order of preference) would you choose for a life's career?

Response:

	First Choice (N=68)	Second Choice (N=64)	Third Choice)N=52)	Most mentioned Specific Jobs
Professional, Technical and Managerial Occupations	40%	50%	54%	Electronics Technician, Forester, Teacher, Doctor & Lawyer.
Clerical and Sales Occupations	6	8	8	Secretary
Service Occupations	15	3	8	Military
Farming, Fishery and Forestry Occupations	0	1	4	
Processing Occupations	0	0	0	
Machine Trades Occupations	18	14	6	Mechanic
Bench Work Occupations	1	0	0	
Structural Work Occupations	19	13	19	Auto body or Parts man, miner
Miscellaneous Occupations	1	11	1	

Item: How sure are you that this is the tupe of work you will actually do for a career?

Response:

Distribution of Responses	
Very definite	15%
Fairly sure	72
Somewhat indefinite	10
Very indefinite	3

Item: What type of work do you actually expect to enter?

Response: (N = 68)

Professional, Technical and Managerial Occupations	32%	Teacher, Draftsman, Radio Technician
Clerical and Sales Occupations	7	
Service Occupations	18	Beautician, Military
Farming, Fishery and Forestry Occupations	0	
Processing Occupations	0	
Machine Trades Occupations	8	Mechanic
Bench Work Occupations	3	
Structural Work Occupations	18	Auto Body Repair or Parts man, miner
Miscellaneous Occupations	0	

Item: How sure are you that this is the type of work you will actually do for a career?

Response: (N = 72)

Distribution of Responses	
Very definite	15%
Fairly sure	72
Somewhat indefinite	10
Very indefinite	3

Item: If you were forced to quit school and get a job right now, what are three jobs (in order of preference that you would like to have?

Response:

Category	First Choice (N=77)	Second Choice (N=73)	Third Choice (N=58)	Most Mentioned Specific Occupations
Professional, Technical and Managerial Occupations	14%	14%	16%	Forester, Teacher
Clerical and Sales Occupations	14	15	17	Clerk, Shoe Salesman
Service Occupations	17	7	22	Bus boy, Cafeteria Worker, Hospital Orderly
Farming, Fishery and Forestry Occupations	5	3	1	
Processing Occupations	0	1	0	
Machine Trades Occupations	12	4	1	Mechanic
Bench Work Occupations	4	4	5	Carpenter
Structural Work Occupations	23	25	26	Construction, carpenter, miner, auto body, or parts man
Miscellaneous Occupations	10	27	16	Truck driver, Box boy, gas station attendant

Item: If you were forced to quit school and get a job right now what job would you actually expect to get:

Response: (N = 63)

Category	Distribution of Choices	Most mentioned Specific Jobs
Professional, Technical and Managerial occupations	3%	
Clerical and Sales Occupations	5	

(continued)

Category	Distribution of Choices	Most mentioned Specific Jobs
Service Occupations	29%	Babysitter, Bus boy
Farming, Fishery and Forestry Occupations	6	Ranch or Farm hand
Processing Occupations	0	
Machine Trades Occupations	1	
Bench Work Occupations	1	
Structural Work Occupations	30	Miner, Construction worker
Miscellaneous Occupations	24	Truck driver, Gas station attendant, Box Boy

Item: Looking back on the time you have spent in high school would say that the time spent has been worthwhile?

Response: (N = 80)

Distribution of Responses	
Very worthwhile	65%
Generally worthwhile	29
Slightly worthwhile	10
Not at all worthwhile	3

Item: Looking back on the time you have spent in high school would you say that the time spent has been pleasant?

Response: (N = 81)

Distribution of Responses	
Very pleasant	27%
Generally pleasant	63
Somewhat unpleasant	6
Very unpleasant	4

Item: To what extent have persons in the high school helped you in selecting school courses which are in keeping with your future career plans?

Response: (N = 81)

Distribution of Responses	
Very helpful	19%
Moderately helpful	49
Slightly helpful	22
No help at all	10

Item: List any courses of a practical nature that you have taken or are planning to take which you see as helpful in securing a job if you were to quit school now?

Response: (N = 170)

Class	Frequency
Art	4
Business	4
Accounting	6
IBM and Business Machines	7
Shorthand and Speed writing	10
Stenography and Secretarial	1
Typing	16
English	17
Indistrial Arts	
Electricity	2
Mechanic-Machinist	2
Wood Working (Carpentry)	18
Welding and Blacksmithing	7
Auto Body Repair	11
Mechanical Drawing and Blueprint Reading	7

(continued)

Class	Frequency
Machine Shop Practice	9
Languages	1
Mathematics	27
Natural Science	6
Biology	5
Home Economics, Interior Decorating, and Health & Inst Food Services	2
Forestry Experience or Survey	1
Physical Science	1
Social Studies	
History	2
Political Science	1
Technical Training	
Nurse's Aide	1
Driver Training	2

Item: List any courses of a practical nature that you have taken or are planning to take which you feel will be helpful in terms of your career plans.

Response: (N = 158)

Class	Frequency
Art	3
Business	1
Accounting	5
Clerical & Filing	1
IBM & Business Machines	4
Law (incl Business Law)	2

(continued)

Class	Frequency
Shorthand and Speed Writing	6
Typing	11
English	12
Public Speaking, Speech, Communication and Public Relations	1
Industrial Arts	
Electricity	4
Mechanic-Machinist	3
Welding & Blacksmithing	3
Wood Working (Carpentry)	7
Auto Body Repair	10
Mechanical Drawing & Blueprint Reading	5
Machine Shop Practice	6
Languages	
German	1
Spanish	1
Mathematics	37
Natural Science	6
Biology	1
Home Economics, Interior Decorating, Health or Food Services	2
Forestry Experience or Surveying	1
Physical Science	5
Chemistry	5
Physics	4

(continued)

Class	Frequency
Social Studies	1
History	10
Technical Training	
Nurse's aide or Orderly	1

Item: What courses of a practical nature would you like to see offered in high school?

Response: (N = 103)

Art	1
Business	2
Accounting	3
IBM & Business Machines	3
Law (incl. Business Law)	6
Stenography & Secretarial	2
Typing	2
Engineering	2
English	2
Library and Speed Reading	1
Industrial Arts	
Electricity	5
Mechanic-Machinist	8
Plumbing and Pipe Fitting	1
Welding & Blacksmithing	4
Wood Working (Carpentry)	3

(continued)

Auto Body Repair	11
Mechanical Drawing and Blueprint Reading	2
Machine Shop Practice	5
Languages	1
French	1
Mathematics	5
Natural Science	2
Home Economics, Interior Decorating, Health, and/or Food Service	3
Forestry Experience or Surveying	4
Timber Experience	1
Physical Science	2
Chemistry	1
Physics	2
Social Studies	
History	1
Technical Training	
Electronics Communications	2
Medical Technician	6
Nurse's Aide or Orderly	9

Item: Would you like to see the school give you more information on the many different occupations that there are and how to get the training for each one?

Response: (N=81)

Distribution of Responses	
Definitely	60%
Probably	33

(continued)

Distribution of Responses	
Doubtful	4%
Definitely Not	2

Item: Would you like to see the schools offer more extensive testing and hold more conferences with you to explain the results of the tests and the and the meanings that the test results have in terms of career planning?

Response: (N = 81)

Distribution of Responses	
Definitely	51%
Probably	33
Doubtful	10
Definitely Not	6

Item: Do you feel the guidance counselor at your school gives you as much information and attention as you need from him in order for you to make wise vocational decisions about your future?

Response:

Distribution of Responses	
Definitely	30%
Probably	37
Doubtful	23
Definitely Not	10

Discussion

As the same form of the YOUTH SURVEY FORM was used with this group as with the Butte area high school seniors it is possible to make some comparisons. Although no tests of significance were applied for the purposes of this report, a perusal of the results does allow comments based upon obvious descriptive differences.

The Job Corps group yields a smaller percentage planning to graduate from high school than does the Butte youth group and of those who do plan to graduate from high school a smaller percentage of the Job Corps group are planning to go on to college. A substantially higher percentage of the Job Corps group are looking at this time toward temporary or permanent jobs and apprenticeships although the two groups show somewhat similar concern with entering vocational-technical training programs in institutions other than colleges. A much larger percentage of the Butte youth group are planning to ultimately complete training for professional occupations while the Job Corps group show a much higher election of service, machine trades, and structural work occupations.

In citing factors of importance in choosing a career the Job Corps group tend to cite salary, hours and security more often and working conditions less often than do the high school group.

It would appear that the Job Corps group feel less need of occupational and vocational information and less need for self information than the Butte youth group although the majority of subjects in both groups indicated some felt need for both of these kinds of information in excess of what they have received up to this point.

SURVEY OF OCCUPATIONS (Firms)

Rationale

As part of the project to secure valid information on Vocational-Technical education needs and the potential for employment of the skilled and trained worker in the Greater Butte Area, a survey of firms, business organizations and industrial enterprises was conducted by the project interviewers. The SURVEY OF OCCUPATIONS form (see Appendix C) was used to gather data on training information and employment relative to entry jobs.

Results

The total number of firms contacted number 381. Out of this pool of replies there were 123 distinct job titles cited. Categorization of jobs was accomplished by employing the *Dictionary of Occupational Titles* (Third Edition) of the United States Employment Service and the presentation of data from the present survey is in terms of the classifications of that publication. The results of the SURVEY OF OCCUPATIONS with firms is as follows:

Item: What is the Job Title of each entry job in your firm:

Response: Number of firms replying was 381

Number of Job Titles identified was 123

Professional, Technical and Managerial Occupations	20	Electronics Technology Draftsman, Storekeeper
Clerical and Sales Occupations	32	Secretary, Stenographer Bookkeeper, Salesman
Service Occupations	14	Cook, Waitress, Butcher
Farming, Fishery, and Forestry Occupations	2	Heavy Equipment Operator, Forester aide
Processing Occupations	6	Baker
Machine Trades Occupations	9	Patternmaker, Diesel Mechanic
Bench Work Occupations	5	
Structural Work Occupations	21	Auto Body or Parts Man, Construction Carpenter
Miscellaneous Occupations	14	Truck Driver, Warehouseman

Item: What is the union affiliation of this job (if any)?

Response: Thirty seven

Most mentioned: Clerks - Retail; Machinists; Teamsters; Woman's Protective; Carpenters and Joiners; Operating Engineers; Painters, Decorators and Paper Hangers; AFL-CIO; Boilermakers, Shipbuilders, Blacksmiths, Furyers and Helpers; Electrical Workers.

Item: How many such jobs does your firm have at present?

Response: There were 51 firms reporting and a total of 6,939 job positions cited.

Item: Vocational-Technical Educational training facilities must, of necessity, be planned in long range terms. What are the anticipated number of positions (assuming an unlimited number of trained workers were abailable) by:

Response:

YEAR	Positions Reported
1968	2372
1970	2551
1975	3572

Item: Are these anticipated positions for full time or seasonal work?

Response: (N = 334)

Distribution of Responses

Fulltime	90%
2 months each year	0
3 months each year	6
6 months each year	2
8 months each year	0
9 months each year	2

EMPLOYMENT AND TRAINING INFORMATION CONCERNING ENTRY JOB

Item: What is the present source of workers to fill this Job?

Response: (N = 649)

Distribution of Responses

Montana State Employment Service	22%

(continued)

Distribution of Responses	
Classified Ads	11%
Walk-in Applicants	24
Present Employees	20
Other (High school referral, Union referral, civil service)	22

Item: For this job what is the age requirement (minimum)?

Response: (N = 315)

Distribution of Responses	
Below age 18	14%
Age 18	50
Ages 19 through 21	29
Ages 22 and older	7

Item: For this job what is the age preferred?

Response: (N = 279)

Distribution of Responses	
Below age 18	2%
Age 18	7
Ages 19 and 20	6
Ages 21 through 29	53
Ages 30 and older	32

Item: For this job what is the sex requirement?

Response: (N = 372)

Distribution of Responses	
Male only	53%
Female only	21
Either sex	26

Item: For this job what is the educational requirement (minimum)?

Response: (N = 320)

Distribution of Responses	
Complete grade 8 or less	5%
Grade 10	5
Grade 12	82
Grade 14	3
College degree	5

Item: For this job what is the specialized training requirement?

Response: (N = 173)

Distribution of Responses	
At least one year	36%
Two years	26
Three years	6
Four years	32

Item: What understandings of skills, competencies and attitudes needed for this job do those who apply for it seem to have?

Response:

Distribution of Responses

Full understanding	12%
Know much	33
Know little	46
No understanding at all	9

Item: How adequate would you judge the vocational counseling to be that these people are getting before they come to you?

Response:

Distribution of Responses

Extremely effective	8%
Moderately effective	37
Slightly effective	38
Not at all effective	18

Item: What is the present training program for this job?

Response: (N = 612)

Distribution of Responses

Apprenticeship	13%
On-the-job Training	44
Special training within the firm	17
Hired already trained	19
Other	6

Item: How effective is the present training program for this job?

Response: (N = 337)

Distribution of Responses	
Extremely effective	35%
Moderately effective	52
Slightly effective	9
Not at all effective	3

Item: What part of the training for this job could be done in the high school?

Response: (N = 361) Distribution of Responses

All of the training	8%
2/3 of the training	35
1/3 of the training	43
None of the training	15

Item: How effective do you think a co-operative work-study program in an expanded vocational-technical education program might be in training for this job?

Response: (N = 359)

Distribution of Responses	
Extremely effective	29%
Moderately effective	54
Slightly effective	11
Not at all effective	5

Item: Would your firm co-operate in such a program if one were developed?

Response: (N = 360)

Distribution of Responses

Definitely	34%
Probably	55
Doubtful	9
Definitely Not	2

Item: If your firm had openings would you give preference to qualified graduates of a Vocational-Technical program in the Butte area?

Response: (N = 341)

Distribution of Responses

Definitely	52%
Probably	44
Doubtful	3
Definitely Not	1

Item: What threeprimary areas of knowledge or skills that should be taught in a Vocational-Technical Education program would helpan entry worker on this job?

Response: (N = 694)

Class	Frequency
Business	14
Accounting	37
Clerical and Filing	27
IBM and Business Machines	27
Law (incl Business Law	5
Shorthand & Speed Writing	10

(continued)

Class	Frequency
Stenography & Secretarial	17
Typing	41
Marketing and Retail Sales	54
Management	7
Engineering	4
Mechanical Engineering	2
English	36
Letter Writing	1
Public Speaking, Speech and Communication, or Public Relations	63
Spelling	7
Penmanship	6
Creative Writing	4
Industrial Arts	18
Electricity	8
Mechanic-Machinist	45
Welding & Blacksmithing	9
Wood Working (Carpentry)	8
Auto Body Repair	11
Mechanical Drawing & Blueprint Reading	31
Machine Shop Practice	6
Sign Painting and Printing	2
Leadership Training	3
Mathematics	64
Computer Technology	2

(continued)

Class	Frequency
Music	1
Natural Science	
Biology	1
Zoology	2
Home Economics, Interior Decorating, Health, and Food Services	26
Forestry Experience or Surveying	10
Range Management	4
Fire Experience	9
Timber Experience	3
Pre-med Training	1
Physical Science	4
Chemistry	2
Geology and Metalurgy	4
Physics	5
Social Studies	
Psychology	5
Logic	1
Technical Training	
Domestic	11
Electronics Communications	10
Advertising, Display Color Coordination	6
Driver Training, Safety Course	20

Discussion

We move now to an examination and analysis of the results of a survey of occupations for firms. For this part of the program to secure information on vocational-educational needs and potential for employment of the vocationally-technically trained in the Greater Butte Area, various firms, organizations, and business enterprises were asked to participate in this survey. Altogether there were 381 survey forms completed and out of this total there were 123 different and distinct job titles. Using the categorization model of the United States Employment Service as presented in their Dictionary of Occupational Titles, we find that 20 of these job titles fall into the category of professional-technical and managerial occupations, 32 are classified as clerical and sales occupations, 14 as service occupations, two fall in the category of farming, fishery, and forestry occupations, five are bench work occupations, 21 are structural work occupations, six are processing occupations, nine fall within machine trades occupations, and 14 would have to be grouped in the DOT category, miscellaneous occupations.

Based on the trends as seen in the reports of the sample of firms drawn for the purposes of this survey, a rather healthy growth is projected through 1975 for the Greater Butte Area with approximately from five to eight per cent increase in work position each year anticipated by the firms themselves.

Looking at some of the specific requirements im general for all of the jobs and positions reported it is found for 93 per cent of these jobs there is an age requirement of 21 years or less. However, when asked what age preference of the employer would be 85 per cent of the employers reported that they would prefer to hire someone 21 years of age or over.

In terms of sex requirements, 53 per cent of the positions reported required males to fill the job, 21 per cent females, and 26 per cent had no preference, either male or female were perfectly acceptable for the position. Educational requirements indicated that most usually, in fact 92 per cent of the cases, there is a requirement of high school graduation. Beyond high school graduation in many of the jobs there is some specialized training required, usually somewhat less than two years.

Most of the firms reported that in filling entry positions they are at present relying on on-the-job training or on hiring people already trained. However, 13 per cent of the positions reported required previous apprenticeship training, 17 per cent of the positions required special training within the firm. When asked to evaluate the effectiveness of the present training programs, 65 per cent of the replies ranged from moderately effective to not effective at all. It is interesting to note that for 43 per cent of the firms reporting there was an indication that two-thirds or more of the training for particular jobs reported should be done in the high school. Another 43 per cent felt that at least one-third of the training should be done in the high school. When asked how effective they thought a cooperative work study program and expanded vocational-technical educational program might be in training for a particular entry job for which they were reporting, approximately 30 per cent reported that this would be extremely effective. Another 54 per cent reported that they felt that this would be moderately effective. A very positive attitude toward vocational-technical educational programs was seen in the replies of firms when the question "would you cooperate with such a program if one were developed" because the replies breakdown as being 34 per cent definitely, 55 per cent probably, 9 per cent doubtful and 2 per cent definitely not. Another reflection of what must be a very positive attitude toward vocational-technical programs in the Greater Butte Area is seen in the stance taken by firms when asked if your firm had openings in the firm would you give preference to qualified graduates of vocational-technical programs in the Butte area, 52 per cent answered definitely, 44 per cent said probably, 3 per cent doubtful and 1 per cent replied definitely not. One final bit of advice from the firms which has implications for planning for a vocational-technical educational program in the Greater Butte Area deals with specific areas of knowledge of skills. Firms felt that the most important primary areas of knowledge that a vocational-technical program should impart as an aid to entry workers who would be seeking jobs at their firms should be mathematics, public speaking, public relations, marketing, retail sales, mechanic, machinist training, typing, driver's training, safety education, mechanical drawing, blueprint reading, English, IBM and business machines, clerical filing, accounting, industrial art, auto body repair, surveying, forestry experience, electronics communications, and training for a domestic maid, or for food service. A summarization then of the results of the survey of occupations for firms would indicate in a rather general way that the kinds of jobs and work positions that are available now and will be in the foreseeable future embrace a large number of positions for which training must be of a vocational-technical nature especially in the technical occupations, clerical and sales occupations, and the structural work occupations. The attitudes of the firms surveyed in the Greater Butte Area would indicate that they would not only endorse the training effectiveness of formal vocational-technical educational programs but would implement this attitude by giving employment preference to those trained in the Greater Butte Area. Indications are that these firms heartily endorse vocational-technical programs and would give overwhelming cooperation in work study programs and expanded vocational-technical educational programs. Further indications of the attitudes of the firms toward vocational-technical programs is implied in their response which says a good deal of the training from one-third upward that is now done by the company, on-the-job, or by the firm itself should be done by a high school or by a similar institution. A need for improvement in vocational guidance and vocational counseling services is indicated in the response of the firms in which they report that the majority of applicants for entry jobs appear to have little or no understanding of the skills, competences, and attitudes needed for the job for which they are applying. In judging the effectiveness of present vocational counseling based on observation of entry workers making applications for work positions, 8 per cent of the firms feel that it is extremely effective as presently constituted, 37 per cent feel that it is moderately effective, 38 per cent feel that it is only slightly effective, and 18 per cent feel that present vocational counseling services available to pre-entry workers is not at all effective. If the efficiency with which individuals perceive and choose careers is to improve, then counseling and guidance services available to these people must be improved. The final general conclusion based upon the survey of occupations for firms results analysis would have to be that there is need for vocational-technical training in terms of the jobs available. Such a program would have the support of firms and such a program would stand a very good chance of improving the effectiveness with which training for entry occupations is conducted in the Greater Butte Area.

SURVEY OF OCCUPATIONS (Labor Organizations)

Rationale

Another part of the project to secure information on Vocational-Technical needs and potential for employment of the skilled and trained worker in the Greater Butte Area involved contacting the labor organizations. The long history of contributions which organized labor has made to the advancement of American Education is well recognized. In keeping with this tradition, it was logical that labor organizations in the Greater Butte Area should be involved in evolving plans for a vocational-technical education program. Therefore, these local union organizations were tapped for information relative to employment potential, as well as information relative to the adequacy of the training program now available in the area. The point of view of organized labor was tapped through a survey of Union Locals in this area.

Results

Using the instrument, SURVEY OF OCCUPATIONS (Labor Organizations), (see Appendix D), nineteen different unions in the Greater Butte Area were polled to determine employment and training information as viewed by these agencies. The results of the survey are presented below:

Item: Would a member of this organization be available for consultation on curriculum and content of training programs if expanded Vocational-Technical training were established in the Butte area?

Response: (N = 19)

Distribution of Responses

Definitely	53%
Probably	37
Doubtful	10
Definitely Not	0

BASIC INFORMATION ABOUT ENTRY JOB COVERED BY UNION

Item: How great is the lack of trained workers to fill the jobs available?

Response: (N = 19)

Distribution of Responses

Critical Shortage	16%
Moderate Shortage	16
Slight Shortage	37
No Shortage of Workers	32

INFORMATION ON TRAINING PROGRAM FOR EACH ENTRY JOB

Item: For this job what type of training is required?

Response: (n = 19)

Distribution of Responses

Apprenticeship	53%
On-the-job	47

Item: What is the typical length of the training program (in months)?

Response: (N = 8)

Distribution of Responses

One month	25%
Five months	12
Six months	12
Twenty-five months	12
Thirty-six months	12
Forty-eight months	12
Seventy-two months	12

Item: Is there a training program for this job in the Butte area?

Response: (N = 17)

Distribution of Responses

Yes	24%
No	76

Item: If there is a training program in the Butte area, what is the adequacy of the program

Response: (N = 8)

Distribution of Responses

Totally Adequate	25%
Usually Adequate	50
Somewhat Inadequate	12
Totally Inadequate	12

Item: Would high school vocational courses compliment the training effort for this job?

Response: (N = 18)

Distribution of Responses	
Definitely	17%
Probably	22
Doubtful	33
Definitely Not	28

Item: What areas of knowledge and/or skills might a Vocational-Technical education program offer as work that would help an employee on this job?

Response: (N = 12)

Class	Frequency
English	
Spelling	1
Penmanship	1
Industrial Arts	
Electricity	1
Mechanic-Machinist	1
Welding & Blacksmithing	1
Wood Working (Carpentry)	1
Mechanical Drawing and Blueprint Reading	2
Sign Painting & Printing	1
Mathematics	1

Discussion

The nineteen unions polled by means of the SURVEY OF OCCUPATIONS (Labor Organizations) were asked to reflect their willingness to participate as consultants in vocational-technical training program planning. Overwhelmingly, they indicated they would either definitely or very probably make someone available to provide consultation on curriculum and training programs. These same unions were also helpful in providing basic information relating to entry jobs in the Greater Butte Area.

The date from the survey of occupations revealed that, in the opinion of leading union officials, the following things are true?

1. There is a critical lack of trained workers to fill such jobs as miners, road construction laborers and stage hands.
2. There is a moderate shortage of trained workers to fill such jobs as precision machinists, pattern workers, sanitary engineers and butchers.
3. There is a slight shortage of trained workers to fill such jobs as cement masons, lathers, teamsters, motormen, bartenders, sheet metal workers and bakers.

The results show, without exception, training for jobs where there are shortages are now on an apprenticeship or on-the-job training type. Among occupations showing shortages of workers, present training programs vary in length, from a nominal period of perhaps one month for miners to forty-eight months in the case of sheetmetal workers. The results of the survey of occupations revealed that there were not training programs in the Butte area for some twenty-six per cent of the entry jobs reported by the labor organizations. In some instances, also there were training programs in the area but these were seen as being inadequate by unions.

Among the areas of knowledge and/or skills that a vocational-technical program might offer, which was cited by one or another of these labor organizations as being of aid to a prospective member in a specific speciality, were such courses as mechanical drawing, blue print reading, welding, spelling, penmanship, mathematics, sign painting, mechanics, electricity and carpentry. Any or all of these specific courses are, of course, potentially, courses that could be taught in an area of vocational-technical training center.

Briefly, an examination of the results of this survey of occupations shows either critical or moderate shortages of trained workers in some thirty-two per cent of the organized jobs within the Greater Butte Area. Thus, based on information from the local labor organizations, it is clearly evidenced that a Vocational-Technical Training Center is needed from both the point of view of inadequate present facilities and from the point of view of employment opportunities for those who would be trained.

THE SURVEY INSTRUMENTS

ID Number

SURVEY OF PARENTS

As part of a program to secure information on vocational education needs and potential for employment of the vocational-technical trained in the Butte area, you are asked to participate in this survey. The impressions, experiences, and opinions of parents such as yourselves are seen as being extremely valuable and important as a basis for planning programs that will best meet the needs of your children, your neighbors and perhaps yourselves. Therefore, your cooperation in answering these questions will be greatly appreciated.

PART I. QUESTIONS TO BE ANSWERED BY THE FATHER

Name____ Age_______________

Address____

Number of children

0 to 6 years of age______

6 to 18 years of age_____

18 years and over _______

INFORMATION ON WORK

Present Occupation ______________________________ Dot Code _______

Is the work you are presently doing what you planned to do while you were still in school?

Exactly the same	Closely related	Only slightly related	Not at all related
/	/	/	/

If not related or only slightly related tell why you aren't doing the type of work that you originally preferred.

____

How long have you been employed on your present job (in months)? _______

What type of training did you receive for your present job?

Apprenticeship______________________

On-the-job training__________________

Special training by the company_________

Vocational-Technical School____________

College or professional school_________

Military service training______________

Other (specify)______________________

How adequate was this training

Very thorough	Generally adequate	Somewhat inadequate	Very inadequate
/	/	/	/

How many times have you been promoted by your present employer?__________

If you had a chance to change jobs or employers, what kind of work would you choose to do?

____DOT code_______

List the number of times you have not worked for each length of time given below:

1 day to 1 month______________________

1 month to 3 months___________________

3 months to 6 months__________________

6 months to 1 year____________________

More than 1 year______________________

List what the principal causes of your not working during these periods were.

____

____

How many times have you had to move in order to find work?____________

What was the distance of your longest move in making a job change?________

Who do you think the services of a Vocational-Technical program should be for:

High school students only______________

High school graduates only______________

Anyone up to age 21____________________

Anyone up to age 35____________________

Anyone up to age 50____________________

Do you think that Vocational-Technical training should be restricted by sex?

Males only____________________________

Females only__________________________

Should be for all______________________

If training for a skilled technical or vocational job were available now, would you be interested and able to take such training?

Definitely	Probably	Doubtful	Definitely Not
/	/	/	/

What particular type of training would you be most interested in taking?

____DOT Code____________

Highest grade of school completed (circle one): less than 8 8 9 10 11

12 13 14 15 16 above 16

List any courses taken during your school days that have helped you to earn a living:

____

Number of correspondence courses taken since your school days____________

List any of the correspondence courses that have helped you earn a living:

____

Number of months spent in the military services__________________________

List any training received during military service that has been helpful in earning a living:

____

Number of training programs completed in a Vocational-Technical program_____

List the types of programs completed in a Vocational-Technical program that have been helpful in earning a living:

____

PART II. QUESTIONS TO BE ANSWERED BY THE MOTHER

Name____Age____________

(Note: If you have been devoting full time to duties as a housewife and do not intend to go to work in the near future please disregard the following questions about work and respond only to those which call for opinion about training programs. These latter questions begin with the*.

INFORMATION ON WORK

Present Occupation________________________________DOT Code_________

Is the work you are presently doing what you planned to do while you were still in school?

Exactly the same	Closely related	Only slightly related	Not at all related
/	/	/	/

If not related or only slightly related tell why you aren't doing the type of work that you originally preferred:

____

How long have you been employed on your present job?____________________

What type of training did you receive for your present job?

Apprenticeship____________________

On-the-job training____________________

Special training by the company____________________

Vocational-Technical School____________________

College or professional school____________________

How adequate was this training?

Very Thorough	Generally adequate	Somewhat inadequate	Very inadequate
/	/	/	/

How many times have you been promoted by your present employer?__________

List the number of times you have not worked for each length of time given below:

1 day to 1 month__________

1 month to 3 months__________

3 months to 6 months__________

6 months to 1 year__________

More than 1 year__________

What were the principal causes of your not working during these periods?

____

____

How many times have you had to move in order to find work?__________

What was the distance of your longest move in making a job change?__________

*Who do you think the services of a Vocational-Technical program should be for:

High School students only__________

High school graduates only__________

Anyone up to age 21__________

Anyone up to age 35__________

Anyone up to age 50__________

Do you think that Vocational-Technical training should be restricted by sex?

Males only__________

Females only__________

Should be for all__________

If training for a skilled technical or vocational job were available now, would you be interested and able to take such training?

Definitely	Probably	Doubtful	Definitely Not
/	/	/	/

What particular type of training would you be most interested in taking?

____

Highest grade of school completed________________

List any courses taken during your school days that have helped you to earn a living.

____

Number of correspondence courses taken since your school days__________

List any of the correspondence courses that have helped you earn a living.

____

Number of months spent in the military services________________

List any training received during military service that has been helpful in earning a living.

____

Number of training programs completed in a Vocational-Technical program______

List the types of programs completed in a Vocational-Technical program that have been helpful in earning a living:

____

PART III. INFORMATION ABOUT YOUR CHILD

Name of child______________________________Age__________

What specific jobs is your child thinking about after leaving school:

Job Title	DOT Code

How do you feel about your child's choices:

Excellent Good Fair Poor
/________/________/________/

List any vocational classes that your child is planning to take in high school:

____

Do you feel the high school is offering enough vocational classes?

Definitely	Probably	Doubtful	Definitely Not

/__________/__________/__________/

If additional vocational classes were offered would you encourage your child to enroll in some of them?

Definitely	Probably	Doubtful	Definitely Not

/__________/__________/__________/

What specific vocational classes would you feel should be offered to high school students?

____

____

Do you feel that vocational classes in high school for most students are worthwhile?

Definitely	Probably	Doubtful	Definitely Not

/__________/__________/__________/

If vocational classes or training were available on a post-high school level, would you encourage your child to enroll?

Definitely	Probably	Doubtful	Definitely Not

/__________/__________/__________/

Would you like to see the schools offer more extensive testing and hold conferences with you and your child to explain the vocational meanings?

Definitely	Probably	Doubtful	Definitely Not

/__________/__________/__________/

Would you like to see the schools give your child more information on the many different occupations there are and how to get the necessary training for each one?

Definitely	Probably	Doubtful	Definitely Not

/__________/__________/__________/

Do you feel the counselor at school gives you and your child as much information and attention as you need to make wise vocational decisions about your child's future?

Definitely	Probably	Doubtful	Definitely Not

/__________/__________/__________/

YOUTH SURVEY FORM

As a part of a program to secure information on Vocational-Technical education in the Butte area, it is necessary to gather information on job planning, interests and aspirations of high school age youth. Your cooperation in responding to the questions contained in this form will be greatly appreciated.

Name______________________________Age________________

Do you plan at this time to graduate from high school?

Definitely / Probably / Doubtful / Definitely Not /

After leaving high school, what do you think you would most like to do?

Take a temporary job and wait for something better________________

Take an available permanent job____________________________

Take training for a trade or skilled occupation in a school__________

Enter an apprenticeship program____________________________

Go to college______________Where?________________________

Other (specify)______________________________________

If you have reached a decision about a life's career, when was the decision reached?

________Have not reached a decision as yet. (If you checked this answer you may skip the next few questions and begin again at the * on page 3)

________They have been made very recently

________About a year ago

________About two years ago

________About three years ago

________More than three years ago

Place a "1" in front of the thing you consider most important in selecting a career, then place a "2" in front of the thing you consider next in importance, and finally a "3" in front of the thing you consider third in importance in choosing a career for yourself.

__________ Salary

__________ Working conditions

__________ Hours

__________ Chances for advancement

__________ Security (regular employment)

__________ Prestige

__________ Work is likely to be interesting

__________ Type of people who do the work

__________ Other (specify)______________________________

Place a "1" in front of the person(s) who has been most helpful to you in the process of considering an occupational choice and in helping you plan for that choice, then place a "2" in front of the person(s) who has been next most helpful and "3" in front of the third most helpful person(s).

__________ Parents

__________ Teachers

__________ Counselor

__________ Employer

__________ Friends

__________ Information in the library

__________ Other (specify)______________________________

If you had all the qualifications to fill any job, what three types of work (in the order of preferences) would you choose for a life's career?

____ DOT Code__________

____ DOT Code__________

____ DOT Code__________

What type of work do you actually expect to enter?

____DOT Code____________

How sure are you that this is the tupe of work you will actually do for a career?

Very Definite	Fairly sure	Somewhat indefinite	Very indefinite
/	/	/	/

*If you were forced to quit school and get a job right now, what are three jobs (in order of preference) that you would like to have?

____DOT Code____________

____DOT Code____________

____DOT Code____________

If you were forced to quit school and get a job right now what job would you actually expect to get?

____DOT Code____________

Looking back on the time you have spent in high school would you say that the time spent has been worthwhile?

Very worthwhile	Generally worthwhile	Slightly worthwhile	Very unpleasant
/	/	/	/

Looking back on the time you have spent in high school would you say that the time spent has been pleasant?

Very pleasant	Generally pleasant	Somewhat unpleasant	Very unpleasant
/	/	/	/

To what extent have persons in the high school helped you in selecting school courses which are in keeping with your future career plans?

Very helpful	Moderately helpful	Slightly helpful	No help at all
/	/	/	/

List any courses of a practical nature that you have taken or are planning to take which you see as helpful in securing a job if you were to quit school now.

____

____

____

List any course of a practical nature that you have taken or are planning to take which you feel will be helpful in terms of your career plans.

____

____

____

What courses of a practical nature would you like to see offered in high school?

____

____

____

Would you like the school to give you more information on the many different occupations that there are and how to get training for each one.

Definitely	Probably	Doubtful	Definitely Not
/	/	/	/

Would you like to see the schools offer more extensive testing and hold more conferences with you to explain the results of the tests and the meanings that the test results have in terms of career planning?

Definitely	Probably	Doubtful	Definitely Not
/	/	/	/

Do you feel the guidance counselor at your school gives you as much information and attention as you need from him in order for you to make wise vocational decisions about your future?

Definitely	Probably	Doubtful	Definitely Not
/	/	/	/

ID Number

SURVEY OF OCCUPATIONS

As part of a program to secure information on vocational education needs and potential for employment of the vocational-technical trained in the Butte area, you are asked to participate in this survey. We need to identify avenues that now exist for vocational training. This survey is intended to help in the accomplishment of these goals. Your cooperation will be most appreciated.

Firm name

Address

Principal products and/or services

Person giving information

(Title)

BASIC INFORMATION ABOUT ENTRY JOB

Job Title________________________________DOT Code__________

Union affiliation (if any)________________________________

The number of such jobs in your firm at present__________________

Vocational-Technical Education training facilities must, of necessity, be planned in long range terms. What are the anticipated number of such positions (assuming an unlimited number of trained workers were available) by:

1968______________

1970______________

1975______________

Full time or seasonal (if seasonal state months)__________________

EMPLOYMENT AND TRAINING INFORMATION CONCERNING ENTRY JOB

Present source of workers to fill this job:

MSES_________________________

Classified ads__________________

Walk-in applicants_______________

Present employees________________

Other (specify)_________________

Job requirements

Age requirement (minimum):__________

Age preferred_________________

Sex requirement:

Male_______________________

Female_____________________

Either_____________________

Educational requirement (minimums: circle one)
Public school or equivalent 8, 10, 12, 14, 16

Specialized training in years: 1, 2, 3, 4

What understandings of skills, competencies and attitudes needed for this job do those who apply for it seem to have?

Understanding Full	Know much	Know little	No understanding at all

How adequate would you judge the vocational counseling to be that these people are getting before they come to you?

Extremely effective	Moderately effective	Slightly effective	Not at all effective

Present training program

Apprenticeship______________________________

On-the-job training__________________________

Special training within the firm______________

Hired already trained________________________

Other (specify)______________________________

How effective is the present training program for this job?

Extremely effective	Moderately effective	Slightly effective	Not at all effective

What part of the training for this job could be done in the high school?

All of the training	2/3 of the training	1/3 of the training	None of the training

How effective do you think a cooperative work-study program in an expanded vocational-technical education program might be in training for this job?

Extremely effective	Moderately effective	Slightly effective	Not at all effective

Would your firm co-operate in such a program if one were developed?

Definitely	Probably	Doubtful	Definitely Not
/	/	/	/

If your firm had openings would you give preference to qualified graduates of a vocational-technical program in the Butte area?

Definitely	Probably	Doubtful	Definitely Not
/	/	/	/

What three primary areas of knowledge or skills that should be taught in a vocational technical education program would help an entry worker on this job?

____

____

____

ID Number

SURVEY OF OCCUPATIONS
(Labor Organizations)

The long history of contributions that organized labor has made to the advancement of American education are well recognized. In keeping with this tradition it is logical that labor organizations in the Butte area should be involved in evolving plans for Vocational-Technical education. In order to plan for expanded training programs it is necessary to present data on the employment potential as well as the adequacy of the training programs available in the area. The attached survey instrument is being sent to the representatives of all locals in this area to solicit data, opinions and recommendations that may be useful in planning and to ensure compliance with Union-Management Contracts under which future union members will work.

Organization______________________________________

Address____

National affiliation__________________________________

Person giving information__________________________

____
(Title)

Would a member of this organization be available for consultation on curriculum and content of training programs if expanded Vocational-Technical Training were established in the Butte Area?

Definitely	Probably	Doubtful	Definitely Not
/	/	/	/

BASIC INFORMATION ABOUT ENTRY JOB

Job Title ______________________________ DOT Code __________

The number of such jobs now covered under this organization __________

How great is the lack of trained workers to fill the jobs available?

Critical Shortage	Moderate Shortage	Slight Shortage	No shortage of Workers

INFORMATION ON TRAINING PROGRAM

Type of training required:

Apprenticeship ______________________________

On-the-job ______________________________

Special training by the company ______________________________

Other (specify) ______________________________

Length of the training program in (months) __________

Is there a training program for this job in this Butte area? __________

If so, what is the adequacy of the program:

Totally adequate	Usually Adequate	Somewhat Inadequate	Totally Inadequate

Would high school vocational courses compliment the training effort for this job?

Definitely	Probably	Doubtful	Definitely Not

What areas of knowledge and/or skills might a Vocational-Technical education program offer work that would help an employee on this job?

____

____

____

VT 004 121
Izzo, William A., And Others
Organization, Administration and Supervision of Vocational Education and Practical Arts Program.

State Univ. of New York, Oswego. Coll. of Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Aug63 206p.

*VOCATIONAL EDUCATION; *PRACTICAL ARTS; *ADMINISTRATOR GUIDES; PROGRAM ADMINISTRATION

This handbook is for use by anyone interested in the organization, administration, and supervision of vocational and practical arts programs. It was developed by a committee of teachers preparing for administrative and supervisory positions. The major sections are: (1) Introduction, (2) Vocational Education and the Community, (3) Problems in Organization and Scope of Vocational Education, (4) Administrative Policies and Practices, (5) Improving the Program, (6) Presenting Vocational Education to the Community, and (7) Trends. Within these sections are the presentations of typical problems together with the committee's solution. Some sample forms relative to these problems are included. The document was reproduced by the spirit duplicating process. (EM)

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ORGANIZATION, ADMINISTRATION and SUPERVISION of VOCATIONAL and PRACTICAL ARTS PROGRAMS

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COLLEGE OF EDUCATION
OSWEGO, NEW YORK
1963

VT004121

ORGANIZATION, ADMINISTRATION AND SUPERVISION OF VOCATIONAL EDUCATION AND PRACTICAL ARTS PROGRAM

William A. Izzo
Edward D. Munson
Herbert E. Swords
Robert H. Turner

Handbook for Supervision and
Administration of Vocational
Education

Instructor: Dr. Adolph Panitz

State University of New York
College of Education
Oswego

August 1963

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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SECTION I

INTRODUCTION

PREFACE

This report is the combined effort of a committee of teachers preparing for administrative and supervisory positions. The material for this handbook was developed through the application of general principles of administration as applied to specific problems in vocational education.

The committee wishes to express its sincere appreciation to Dr. Adolph Panitz, Principal, Edison Technical High School, Mt. Vernon, New York, for his leadership and assistance.

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DEFINITIONS

The terms defined here are those which, it is felt, might cause misunderstanding and confusion on the part of the reader. They are defined for the purpose of this study.

Industrial Arts, defined by the State Education Department, "... is a subject; the broad study of the materials, organization, tools, processes, products, jobs and the human problems of industry. It is developed through the planning and construction of projects of interest to students, discussions, observations, and readings related to industry."[1]

Vocational industrial education is designed to prepare youths and adults, for useful employment in trades and industrial occupations. It is for selected groups who have the necessary intelligence, physical characteristics, general education, and vocational objective. The major emphasis is on the work in the shop.

Vocational technical education is designed to prepare for employment in technical occupations such as some electrical fields, industrial chemistry, architectural drafting, and mechanical fields. The emphasis is more on technical knowledge and less on skill; more on laboratory and classroom learning; less on shopwork. It is for selected groups who have the ability to learn considerable science and mathematics and to deal with abstract ideas.

---

[1] University of the State of New York, State Department of Education, Industrial Arts Syllabus In Comprehensive General Shop: For Grades 7-8-9, The Department, Albany: (1949) p. 9

Related subjects are those specifically related to a trade or technical occupation. They are taught in connection with vocational industrial and vocational technical courses and require teahcers, especially certified for these subjects.

Apprentice training refers to an organized program for learning a specific trade on the job with the addition of certain shop work and related subjects taught in a vocational school for a certain number of hours per week. Labor Department provides for indenture contract.

THE VOCATIONAL EDUCATION DIRECTOR LOOKS AT HIS JOB [1]

The administration of vocational education presents problems of special complexity and difficulty. Because of the technical knowledge needed and the multiplicity of the administrative duties involved, a special administrator for vocational education should be employed in each school district where a program of vocational training is needed.

Variations in occupational activities and practices in different communities make it necessary to formulate courses and instructional content to fit the particular needs of the area for which training is being given. The content of courses must be varied to meet the different needs of young people preparing to enter occupations and of adults who wish to upgrade themselves in their jobs. Courses must be continually reviewed and revised so that they are always in harmony with current working requirements in the occupation.

In practice, this places a heavy burden on the local school system which must develop its own program and course content to a large extent. The superintendent of schools usually does not have the necessary time or experience with industry, business, agriculture, and homemaking to enable him to direct the diverse details involved in a vocational program designed to meet community needs.

---

1. American Vocational Association, Administration of Vocational Education at State and Local Levels, Washington, D. C., P. 10-11

For this reason, responsibility for the program is best delegated to a competent, qualified vocational administrator who can undertake the specialized task of building a tailor-made program of vocational education. Such a person will know what programs should be promoted, whom to contact for assistance and cooperation, and how to coordinate the varied vocational activities of the area. The local school authorities should insist on having a competent administrator in charge of this important phase of the total school program.

Many more communities can justify the appointment of a director of vocational education with defined authority over the entire vocational program. Large urban areas have diversified occupational training needs and many prospective students, calling for coordination and specific administrative techniques. Smaller cities also have many vocational training problems and need a qualified vocational administrator for the proper coordination and effective operation of [illegible] program, even if he devotes a portion of his time to other vocational work. In some small school districts, and particularly in those rural areas which may have only vocational agriculture and home economics courses, it has been found that a supervisor, local or area, or a teacher-coordinator, if properly qualified, can handle the necessary administrative duties.

Some states now provide vocational education opportunities on an area basis. For example, in New Jersey, the county serves as the school district for vocational education, and there is an independent county board for vocational education, with a county administrator for vocational education who is responsible directly to the county board. Some such system has great merit because it provides vocational training opportunities in an efficient and economical way for areas which might not otherwise be able to afford vocational education. At the same time, it guarantees that the vocational program has an administrator with authority to act in the interests of the program.

ADMINISTRATIVE DUTIES

The specific requirements of vocational education demand an administrator capable of carrying out many duties, some of which are highly technical. These responsibilities include the following:

> Selection or recommendation of the professional staff, including teachers, and the organization of professional pre-service and in-service training courses for teachers.
>
> Direction and supervision of the total program of vocational education, including courses for all-day and part-time students, out-of-school youth, and adults, in both day and evening classes.
>
> Continuous production and revision of vocational courses to meet the changing occupational demands of the area.
>
> Purchase, installation, and maintenance of equipment and storage and distribution of consumable materials.
>
> Preparation of budgets and equitable distribution of available funds to the various services.
>
> Promotion of studies and surveys to keep the vocational program in tune with the demands for workers of all types in the area.
>
> Development and revision of instructional materials adapted to local needs.
>
> Organization of special vocational courses as needed, for supervisory training, labor shortages, defense production, or other emergency needs.
>
> Working with advisory groups, both general and craft committees, in the interests of coordinating school instruction with occupational needs.
>
> Supervision of adequate guidance and counseling services for the vocational phases of the community's schools, including placement and follow-up services to graduates.

Promotion of the vocational program through appropriate exhibits, news releases, school visits, radio and television, etc.

Solicitation of the public favor and support that is necessary to meet the relatively large costs of vocational education.

Development of close and friendly relations with labor, employers, and other interested community groups and individuals, outside the school organization.

Maintenance of cooperative relationships between the vocational education program and other phases of education.

Maintenance of continuous cooperative relationships between the general administration of the local school system and the state and federal vocational authorities who are concerned with the vocational program of the public schools.

The local administrator should be the kind of person who can furnish leadership and inspiration to the staff of principals, supervisors and teachers in the vocational education program. He needs to be much more than an efficient administrator if the vocational program is to grow in service to the community. He must be a person of integrity, in good standing with labor, civic, and employer groups. He should believe in vocational education and be able to inspire others to work hard for the program. Vocational education, although now an important part of public education, still needs those with a pioneer spirit who are willing to render service beyond the ordinary call of duty.

GENERAL EDUCATION

The area of the curriculum that is directed toward providing common or similar experiences for universal needs may be termed "general education". It may be defined as "the program to meet the educational needs that every individual has by virtue of being a person and a member of a social group regardless of his particular position and professional or vocational goal."[1]

The elementary school program is almost entirely directed toward general education and, to an increasing degree, this is also true in the junior high school. Although differences in emphasis exist among high schools, examination of the required work in the typical high school reveals that approximately half of the programs are in this category. This presumably is the work regarded as universally needed and by inference represents general education. Whether or not it is the best program of general education is another matter, but at least the presence of constant, required subjects means that high schools now have a program of general education.

Although the need for general education may be common to all people, it must be recognized that even here there are different levels to which the program can be caried, rather than a standard level for all youth. The same ends are sought, much common content is used, but a broader range of generalizations and inferences is attempted with some students than with others.

---

1. Austin, David B. and others, American High School Administration Policy and Practice, New York; Holt, Rinehart and Winston, C. 1962 P. 210

VOCATIONAL EDUCATION

The composition of our high school population has changed drastically in the last fifty years. The secondary school is no longer a select training ground for prospective college students. A recent study shows that out of every 100 children entering the fifth grade together, fewer than half graduate from high school[1] and only 38 out of every 100 high-school graduates are currently entering college.[2] Of this group 50% drop out.

In order to meet the needs of youth and adults, many school systems have incorporated vocational education in the curriculum. Vocational education has been a vital and successful part of the total educational plan since its inception in the early 1900's. Its outstanding contribution to the country's training needs through two world wars without interruption of its regular function in secondary education is perhaps unparalled in educational history.

The importance of vocational education was stressed recently by Dr. Walter M. Arnold, U. S. Assistant Commissioner of Education for Vocational and Technical Education. During the 1960's he points out, 26,000,000 high school graduates and those who drop out of school, will enter the working world. But only 5 percent of the many jobs available will be classified as "no skills required." The President's Committee on Youth Employment, in its report to the White House, forecast a grim future for hundreds of thousands of young people who leave high school without training or technical skills.

---

[1] Annual Report of the Federal Security Agency, Office of Education, U. S. Government Printing Office, Washington, D. C., 1952, Page 24.

[2] Ibid. Page 26.

Here is the paradox: During the school year 1962-63 some 750,000 young people between the ages of 19 and 22 were out of school and looking for jobs. They did not qualify for available jobs because they did not have any skills to offer. Yet, the "help wanted" columns every day advertise for specialists in electronics, data processing and computer programming, designers, chemical technologists, health technicians and similar occupations.

The controlling purpose of vocational education is to fit for useful employment. It gives purpose and meaning to education by relating school work to a specific occupational goal. Vocational education means more than training for specific job skills - it develops abilities, understandings, attitudes, working habits, and appreciations which contribute to a satisfying and productive life.

Vocational education is not a subject - it is a well-rounded program of studies aimed at developing competent workers. The goal of vocational education is an American citizen who is competent economically, socially, emotionally, physically, and in a civic sense.

The program of vocational education is not offered in lieu of general academic education, but grows out of it, supplementing and enhancing it. It includes the mandated subjects plus an elective sequence in an area of specialization. Although the program is aimed primarily at preparation for useful employment, it is not necessarily "terminal" in nature. In many cases graduates have completed most of the entrance requirements for college.

SECTION II

VOCATIONAL EDUCATION AND THE COMMUNITY

VOCATIONAL EDUCATION AND THE COMMUNITY

The ultimate test of a good vocational education program is the extent to which it satisfactorily meets the training needs of the youth and adults in the community. In addition, the comprehensive program must be so organized as to meet the needs and desires of pupils in the area of general education. The specific needs for courses and course content must be obtained from industry and from workers and kept current through continuous contacts with employers, labor, and the general public.

The local director is the person primarily responsible for determining needs and for seeing that the program is kept in line with the needs for and the needs of local workers--both youth seeking pre-employment training and older youth and adults seeking upgrading in their present occupations.

The local director is the person primarily responsible for maintaining contacts with the local employers, labor leaders, and the general public through advisory committees and individual contacts in order to keep the educational program in tune with the needs and desires of the people and keep the community informed of the training opportunities available in the schools.[1]

---

[1] Coe, Burr D., Administration and Super vision of Vocational and Practical Arts Education, New York: The State Education Department 1954, p. 112.

TYPES OF SURVEYS THAT MAY BE EMPLOYED

Before planning any type of Vocational Education program, the Director should have the support of the Chief School Administrator and the Board of Education to conduct a survey of the community, with special emphasis on the nature and extent of employment in various fields where the schools might provide skilled workers. The result of such a survey should provide justification for the initiation or extension of Vocational Education facilities of the public schools.

General Objectives of a Community Survey.

a. To discover the extent to which the schools are now meeting the needs of the community.

b. To determine employment trends and needs for trained workers.

c. To determine the needs of present workers for additional training.

d. To determine to what extent present training facilities match training needs.

e. To bring about closer coordination between the schools and industry and to stimulate public interest in the educational program.

Sources of Data.

Before proceeding with direct sources of information, it is well to consider certain secondary sources of data about the community which have been compiled by other agencies. Lang[1] lists 23 different agencies and organizations which provide community data.

---

[1] Lang, Edward H., Community Surveys in Determining Needs for Vocational Industrial Education, New York: University of the State of N. Y. Bulletin Number 1284, January 2, 1945, p. 7-8.

Surveys may be designed to obtain direct information to determine needs of employer, employee, and student. The following survey instruments have been used by various administrators in Vocational Education. In this type of survey many forms of interesting data are uncovered but definite objectives are necessary in order to collect only significant data.

Samples of the survey instruments are included in this section.

VOCATIONAL SURVEY
Sponsored by the
Vocational Education & Extension Board of
Nassau County

1527 Franklin Ave. GA3-3000 Mineola, N. Y.

1-0
2-6 EMPLOYEE CENSUS

Date________________

Information contained in this questionnaire will be held in strictest confidence and will not be divulged as an independent report. It will be used for statistical purposes only.

We are desirous of knowing the number of persons in your employ below the level of supervision, administrators and foremen whose positions may be classified as:

(1) Clerical
(2) Skilled Trade
(3) Semi-professional (below college level)

To assist you in the classification, we are listing herewith the various general occupational positions which may be used for grouping your various job titles. You do not have to list each specific job title if the same basic or general clerical, trade or semi-professional skill is desirable or required. If necessary or uncertain as to classification, please list your specific job titles.

1. CLERICAL POSITIONS

Typist
Secretary
Stenographer
Office Machine Operator
Technical Secretary

File Clerk
Bookkeeper
Accountant
Receptionist
Sales Clerk

Stock Clerk
Tool Room Clerk
Payroll Clerk
Route Clerk
Mail Clerk

Clerical Skill or Job Title	No. of Employees		Clerical Skill or Job Title	No. of Employees	
	Male	Female		Male	Female

2. SKILLED TRADE POSITIONS (General Classification)

Agricultural Trades
Florist
Truck Farmer
Poultry Raiser

Amusement Trades
Actor
Announcer (Radio, etc.)
Musician

Home Service Trades
Air Conditioning Serviceman
Automatic Heating "
Building Repairman
Radio & Television "
Upholsterer
Gardener

Personal Service Trades
Barber
Beautician
Clothing Cleaner & Dryer
Dental Mechanic
Dentist's Office Asst.
Hotel Worker
Shoe Repairman
Jeweler
Watch & Clock Repairman

Building Trades
Bricklayer
Carpenter
Electrician
Painter & Decorator
Plumber
Roofer
Cabinetmaker
Plasterer

Metal Trades
Foundry Worker
Patternmaker (wood)
Machinist
Sheet Metal Worker
Tool and Diemaker

Printing & Graphic Arts Trades
Commercial Artist
Commercial Photographer
Printer
Sign & Show Card Writer

Public Utility Trades
Electrician
Telephone Mechanic
Plant Operator (steam,
gas, electric)
Plant Maintenance

Transportation Trades
Automobile Mechanic
Aviation Mechanic
Boatbuilder
Boat Operator
Railroad Worker

Needle Trades
Costume Designer
Trade Dressmaker
Men's Tailor
Milliner

Food Trades
Baker
Butcher
Grocer
Restaurant and
Tearoom Worker

Trade Skill or Job Title	No. of Employees		Trade Skill or Job Title	No. of Employees	
	Male	Female		Male	Female

SKILLED TRADE POSITIONS (Continued)

Trade Skill or Job Title	No. of Employees		Trade Skill or Job Title	No. of Employees	
	Male	Female		Male	Female

3. SEMI-PROFESSIONAL POSITIONS (below college level)

- Commercial Artist
- Advertising Layout
- Illustrator
- Draftsman
- Junior Draftsman
  - Architectural
  - Mechanical
  - Structural
  - Electrical
  - Aviation
  - Electronics
  - Radio
  - Junior Designer
  - Assistant Designer
- Instrument Designer
  - Jig Designer
  - Tool Designer
  - Laboratory Asst.
  - Assistant to Chemist
  - Assistant to Engineer
  - Production Inspector
  - Equipment Testor
  - Assistant Metallurgist
- Technical Calculator
- Costumer Designer
- Costume Illustrator
- Interior Decorator
- Medical Lab Technician
- Dental Technician

Other positions of semi-professional or technical nature.

Semi-Professional Technical Skill or Job Title	Number of Employees		Semi-Professional Technical Skill or Job Title	Number of Employees	
	Male	Female		Male	Female

VOCATIONAL SURVEY
Sponsored by the

Vocational Education & Extension Bureau of
Nassau County

1527 Franklin Ave. GA3-3000 Mineola, N. Y.

1-0
2-5

QUESTIONNAIRE TO SERVICE AND TRADE ESTABLISHMENTS

Gentlemen:

The Vocational Education and Extension Board of Nassau County is sponsoring a survey to determine the need for vocational education on the high school level for adolescents and adults. Your cooperation in furnishing us with the information requested in this questionnaire will be of considerable value and is deeply appreciated.

Information contained herein will be held in strictest confidence and will not be divulged as an individual report. It will be used for statistical purposes only.

Charles R. Wallendorf
Director of Survey

Date____________________

3 ( ) Name of Firm____
4 ( ) Address________________________________Phone___________
5 ( )
6 ( )

Data Furnished By:

Name____________________________Title____________________

Name____________________________Title____________________

7 ( ) Principal products or activities_________________________
8 ( ) ____
9 ( ) Please indicate total number of employees
10 ( ) 1950__________ 1953__________ (Est.)1956________

Do you hire beginning workers from high school?

11 (1) __________Yes
(2) __________No

If Yes, how do you obtain same?

12 (1) __________All)
(2) __________Some) Contact with high schools in Nassau County
(3) __________None

13 (1) __________All)
(2) __________Some) Contact with high schools outside of County
(3) __________None)

14 (1) __________All)
(2) __________Some) Contact with N. Y. State Employment services
(3) __________None)

15 (1) __________All)
(2) __________Some) Other - please indicate ____________________
(3) __________None) ____

16 If a satisfactory arrangement could be made to have a placement bureau in each high school, to what extent would you be willing to cooperate in the placement of high school beginning workers?

____

____

17 What are your minimum requirements for initial employment?
(1) __________High School graduation
(2) __________Three years of high school education
(3) __________Two years of high school education
(4) __________One year of high school education
(5) __________Elementary school graduation

18 What training should the high schools give to help boys and girls qualify for employment in your company?
With respect to general education ______________________________

____

____

19 With respect to attitude and personality ________________________

____

____

20 How do you train newly employed workers?
(1)__________Organized training department or school
(2)__________On the job
(3)__________Other - Please specify ______________________________

21 How long does it take to train new workers before they may be considered productive?

Time	Type of Work
(1)________________________	Skilled workers - with previous experience on the job
(2)________________________	Skilled Workers - with trade training but no experience

(3) ______________________ For a skilled craft job-with no training or experience

(4) ______________________ Clerical or retail sales job-with previous experience on the job

(5) ______________________ Clerical or retail sales job-with training but no experience

(6) ______________________ Clerical or retail sales job-with no training or experience

(7) ______________________ For a semi-skilled job such as gas station attendant, machine operator, etc., with previous job experience

(8) ______________________ For a semi-skilled job with no experience

Does your company recognize specialized trade or technical training given in the high school by starting beginning workers at a higher initial salary and/or shortening the apprenticeship requirements?

22 (1) ___________ Yes
(2) ___________ No Clerical Workers

23 (1) ___________ Yes
(2) ___________ No Craft Apprentice

24 (1) ___________ Yes
(2) ___________ No Semi-skilled

25 (1) ___________ Yes
(2) ___________ No Retail Sales

26 Are beginning high school workers given preference in the initial hiring if they have had specialized training?

(1) ___________ Yes
(2) ___________ No

27 (1) What kinds of jobs do you have difficulty in filling with properly qualified personnel?

_______________ _______________ _______________

_______________ _______________ _______________

28 ( ) What are the shortcomings in the education of the people who apply for these positions? ___________________________

____

____

29 In what counties do your employees live? Please estimate percent.

(1) _______________ %Kings County
(2) _______________ %Queens County
(3) _______________ %Nassau County
(4) ___________ %Suffolk County
(5) ___________ %Bronx County
(6) ___________ %Westchester County
(7) ___________ %Other

For what jobs should the adult education program supported by public funds provide suitable training courses?

		Job Title	Approximate No. needing training
30	Retraining for new skills		
31	Apprentice Training		
32	Adult Up-Grading		
33	Foremanship, management and/or supervision		

At the present time some schools, in cooperation with local industry in New York State, offer a cooperative (work-study) program in which pupils spend part time in school and part time at work under appropriate supervision. Would you be willing to join such a program?

34 (1)______________Yes
(2)______________No

If so, for what type of employment would you be willing to hire part-time, work-study students?

		Approximate Number	
35	Type of work	Over 16	Over 18

COMMUNITY INTERVIEW SURVEY FOR SOCIAL AGENCIES

Organization____________________________ Date_______________

Address________________________________ Phone ______________

Data furnished by ____________________Title___________________

1. Nature of activities or services rendered ___________________

2. Geographic area covered by organization ___________________

3. What part of the area population is served _________________

4. What general age groups are recipients _____________________

5. For what reasons are these cases referred to you ___________

6. Is there any special geographic location from which many of these cases come? ___________________________

7. What is done to rehabilitate these people? __________________

8. What training facilities are available? _____________________

9. Is any use made of existing facilities? ____________________

10. If so, to what extent ___________________________________

11. What training facilities are needed _______________________

12. What percentage of all those cases you deal with remains for:

    Less than 6 months ______6 months to 1 yr.______more than

    1 year _______

13. What do you think the future trend will be _________________

THE UNIVERSITY OF THE STATE OF NEW YORK
The State Education Department
Division of Industrial Education
Albany

Survey of Need for Vocational Education
Form 1 - For Employers

Name of firm______________________________

Address______________________________

Persons Interviewed

Name________________ Title________________

Name________________ Title________________

Principal products or activities____________________

Number of Employees 1949________ 1952________ Est. 1955______

Employment practices - How do you generally hire employees? Check

At the gate______ Through DPUI______ Through Schools______

Private Employment Agency______ Through Union________

Through employees________

Other (describe)________________________

1. What do you think the schools at the high school level or above can do to help boys and girls qualify for employment in your company?____________________

____

____

2. Can you suggest types of courses the public schools could provide which would be desirable for employees in general regardless of job title?____________________

____

____

____

3. Adult Education For what payroll titles can the public provide suitable up-grading training courses?

Job title	Training in (check)	
	Skills	Related information
1		
2		
3		
4		
5		
6		
7		
8		

4. Cooperative education For what payroll titles would you be willing to hire part-time, work-study cooperative students?

Part-time, work-study students are students who spend part time in school and part time working in business or industry. It may be done either on a half-day in school and half-day at work basis or on a week in school and week at work basis. Often students are paired, working and attending school alternately.

Job title	Students (check)	
	Under 18	Over 18
1		
2		
3		
4		
5		
6		
7		
8		

5. a. Management and supervision training. Do you provide management and supervisory training to:

(1) people in management and supervisory positions? _____

(2) like candidates for management and supervisory positions? _____

b. List the payroll titles from which you accept candidates for management and supervisory training.

1____

2____

3____

4____

5____

c. Who gives the training for management or supervisory positions? Check

______Outside management and supervisory training specialist

______Plant conference leaders

______State or school conference leaders

______Other - please specify

Dear Alumnus:

To help us bring vocational training up-to-the-minute, and to provide the occupational training you desire and the facilities you deserve, we are asking your help in a survey of the need for vocational education in Erie County. Please answer all questions as fully as possible.

Thank you

Full Name____

Check: Male________ Female________ Married________ Single_______

Are you now? (Check) Employed________ Unemployed________

At school or college________ In Military Service________

Parent's Occupation: Father_______________ Mother____________________;

For what occupation were you trained or in training when you left school?

____

What occupational, trade, technical or other subjects, if the school had offered them, could have helped you in your work experience?

____

What evening, full or part-time courses have you taken since leaving school?____

What was the first job you held after leaving school?__________________

____

How did you get your first job? (Check) Advice of family____________

Friends_______ Husband_______ Wife_______ School____________

Job Agency_______ Previous work experience_______

How far was your first job from your home? (Check)Less than 2 miles___

2-5 miles_______ 6-10 miles_______ More than 10 miles________

If you have changed jobs, what is your present work?__________________

____

How far is your present job from home? (Check) Less than 2 miles_____

2-5 miles_______ 6-10 miles_______ More than 10 miles________

List other jobs held: (Other than first or present)__________________

____

What job are you aiming at?______________________________________

What courses can the schools offer to help you?_____________________

____

INTERVIEW QUESTIONNAIRE - UNIONS

Date

Name of Organization:

Title of Person Interviewed:

Brief description of work performed for organization:

Part time Full time

- -

1. Does he understand General Education?

2. Does he understand Vocational Education?

3. What is his attitude ~~toward Voc~~ational Training in public schools?

4. What is the attitude of his organization toward Vocational Training in the Public Schools?

5. Where do their applicants for apprenticeship come from?

6. What is the attitude or policy for admitting graduates of Vocational Education courses to union membership?

7. What is their attitude toward cooperating in designing course content for Vocational programs offered in the public schools?

8. Wo what extent are they willing to support the Vocational program in the public school?____________________________

9. Are they offering apprenticeship related training programs?

Yes____________ No____________

10. What is the minimum educational requirements for apprenticeship applicants?____________________________

11. What is their attitude or policy on trade extension courses for journeymen?____________________________

INTERVIEW QUESTIONNAIRE - SCHOOL ADMINISTRATORS

Date____________________

Title of person interviewed____________________________

Town or City____________________________________

1. How well does the superintendent/principal understand Vocational Education?__________________________

2. What does the superintendent/principal have for attitudes toward Vocational Education?__________________________

____

3. What Vocational Education programs are being offered in the high school or schools under his jurisdiction?________________

____

4. What Evening Trade Extension or Adult Education programs are offered in the high school or schools under his jurisdiction?

____

5. Is there a director or supervisor for the evening programs offered?______________ Full time:________ Part time:________

6. What support is there in the community for Vocational Training?____________________________________

7. What provisions are in the present budget for Vocational Education?___________________________________

8. What is his opinion of the community as a place to live?

____

9. What is his attitude towards the Board of Education?_______

____

10. In his opinion, what is the Board of Education's attitude toward Vocational Education?____________________________________

____

11. In his opinion, how well does the Board of Education understand Vocational Education?____________________________________

12. Does the Board of Education utilize the services of an Advisory Committee?____

13. What representation does industry and labor have on the Board of Education?____

14. What facilities are presently available for Vocational Education?________________________________(Ask for tour of buildings.)

15. What plans have been developed for keeping Vocational Education up to date?____

16. What is his interest in 100% state subsidy for new experimental programs?____

17. What does he see as the need in the community for Vocational Training?____

18. What is the drop-out rate in the high school or schools?

a. Boys________________ b. Girls_________________________

19. What percent of graduates of high school go on to higher education? %________________________ No. to 4-year programs_____

No. to less than 4-year programs_____________________

20. What is the anticipated high school enrollment over the next five years?____

21. Are the school facilities used by different organizations in the community?________________ If so, get a list.

ERIE COUNTY VOCATIONAL SURVEY

QUESTIONNAIRE FORM FOR HIGH SCHOOL SENIORS

TO THE STUDENT

Every high school senior in Erie County is being asked to answer the questions on the following pages.

From the replies we hope to find out what your school and other schools in Erie County can do better to prepare you and the young men and women who come after you for the work you will do after leaving school.

Will you help by answering the following questions to the best of your ability? Thank you.

DIRECTIONS

Many of the questions on the following pages are followed by several suggested answers. In answering these questions, place an X in the space following the answer which best expresses your opinion.

Some of the questions ask you to write your opinion. In these questions print or write your answer clearly in the space following the question.

Read each question through carefully before deciding on your answer. Be sure you understand the question. If you are in doubt about the meaning, ask the person in charge.

Be sure to answer ALL questions in the sections which apply to you.

PART I

1. Name of School: ______________________________
2. Age (circle one): 15 16 17 18 19 20 or over
3. Sex: Boy ________ Girl ________
4. What do you plan to do after graduation?
    - Go to work .... ________
    - Enter Military Service .... ________
    - Attend Business or Trade School ________
    - Attend Buffalo Technical Institute ________
    - Attend College or University ________
    - Other (please name) ______________________________
5. What is the occupation of your father or guardian? ________ ______________________________
6. If mother or guardian works (other than housewife) what is her occupation? ______________________________

NOTE: If you plan to attend another school after graduation, you need answer NO FURTHER QUESTIONS. Otherwise, continue with PART II.

PART II

7. Check below the courses which you have taken for more than one year:

Agriculture ____
Art ____
Business ____
Home Economics ____
Ind. Arts ____
Music ____
Science ____
Trade or Technical ____

8. In what activities, other than courses, have you participated which you think will help prepare you for a job after graduation?

____

____

9. If it had been available, what would you have liked to take in high school better to prepare you for a job after graduation?

____

10. Would you have been willing to go to a neighboring school to get what you suggested in Question 9? Yes ____ No ____

11. If bus transportation was provided from your community to a school offering special training for a specific job in which you were interested, how far would you be willing to travel to get there (1 way)?

Less than 2 miles ____
2 - 5 miles ____
6 - 10 miles ____
More than 10 miles ____

12. How far does your father or guardian travel to work?

Less than 2 miles ____
2 - 5 miles ____
6 - 10 miles ____
More than 10 miles ____
No set distance ____

13. What kind of work would you like to do after graduation? List your first and second choice.

1st Choice ____

2nd Choice ____

14. What has helped you most in arriving at the choices you listed in question 13?

Advice of Family ____
Advice of Friends ____
Advice of School ____
Part-time work on same job or with same company ____
Courses taken in school ____
Made up my own mind ____

Other (Please explain) ____

NOTE: If you Plan to enter Military Service immediately after graduation, you need answer NO FURTHER QUESTIONS. Otherwise continue with PART III.

PART III

15. Have you been employed for wages in any part-time work during your high school years. YES _____ NO _____

16. If YES, what kind of work was it? ______________________________

17. Will this part-time employment lead to full-time employment after graduation? YES _______ NO ______

18. Do you have a job lined up at which you will work after graduation? YES ______ NO______

19. If YES, what is the job? ____________________________________

20. After graduation, when you are working, would you attend adult education courses in the evening which would advance you in your work? YES _______ NO ______

21. What kind of adult education courses do you think might help you to advance in your work? ________________________________
____

22. Do you think you might ever attend adult education courses in the evening which might be of benefit to you in other ways than helping to earn more money? YES ______ NO ______

23. Check the areas below which you might think would be of interest to you after you are working, if offered in the evening in a nearby school.

High school subjects . . . . . _________
Participation in community projects . . _________
Discussion of local, national or world affairs _________
Art Classes . . . . . . _________
Hobby and craft classes . . . _________
Classes about industrial and labor . _________
Dramatics groups . . . . . _________
Marriage and family life classes . . _________
Recreation and health activities . . _________
Music (orchestra, chorus, etc.) . . _________
Business subjects . . . . _________
Homemaking classes . . . . _________

VOCATIONAL SURVEY
Sponsored By The

Syracuse Board of Education
City School District
409 West Genesee Street
Syracuse, New York

QUESTIONNAIRE TO BUSINESS AND MANUFACTURING ESTABLISHMENTS

Gentlemen:

Employers are the school's best customer and their views on the youth and adults they employ should be of interest to all concerned. The City School District is conducting a survey to determine the need for vocational and technical education on the high school level. Your cooperation in furnishing us with the information requested in this questionnarie will be of considerable value and is deeply appreciated.

Information contained herein will be held in strictest confidence and will not be devulged as an individual report. It will be used for statistical purposes only.

Director of Survey

Date____________________

Name of firm____

Address____

Data furnished by:

Name____________________________________ Title____________________

Name____________________________________ Title____________________

Principle products or activities______________________________________

____

Please indicate total number of employees for:

1960__________ 1963______________ 1966________________

1. Do you hire personnel:

Aged 18 or over (1)________Yes (2)_____No

Aged 16 or over (1)________Yes (2)_____No

2. What are your minimum requirements for initial employment?

(1) ______High School graduation

(2) ______Three years of high school education

(3) ______Two years of high school education

(4) ______One year of high school education

(5) ______Elementary school graduation

3. When hiring, does your company give preference to high school graduates with specialized training?

(1) _______Yes (2)_______No

4. Do you find it difficult to obtain skilled help?

(1) _______Yes (2)_______No

If answer is yes, state occupation.________________________

____

5. As an employer, what adult evening vocational or technical courses would recommend be conducted at the high school?

____

6. Would your company recognize specialized training by a higher starting wage, or an advanced apprenticeship for:

Technical occupations

(1) Yes _____ (2) No _____

Skilled trade jobs

(3) Yes _____ (4) No _____

Clerical jobs

(5) Yes _____ (6) No _____

Semi-skilled jobs

(7) Yes _____ (8) No _____

7. As an employer, what courses of study (programs) would you like to see added to the high school program?

____

____

8. How are your employees trained?

(1) On-the-job training ________

(2) Organized plant training ________

(3) Employees receive training elsewhere ________

(4) No special training required ________

Questionnaire for Private Citizen

Date____________________

Male__________

Female_________

Occupation:(husband)____________________ (wife)______________

Number of children in family____________

Boys:________ Ages:_________;_________;_________;__________

Girls:_______ Ages:_________;_________;_________;__________

Do they like school?______________________________________

What activities do they like best?___________________________

What activities do they like least?__________________________

What is the highest grade attained in school?

Father______________; Mother__________

What is your opinion of our high school offerings?_______________

What civic organization are you a member?______________________

Have you had vocational training?(father)______________________

(mother)______________________

What vocational training would you like to see added?_____________

____

What are your hobbies?_______________________________________

Have you taken part in adult education programs?________________

Have you taken part in trade extension?________________________

Have you taken part in in-plant training?______________________

Where?____

Do you own your own home? Yes - No

Do you rent? Yes - No

How many cars do you own?______

How many years have you been with your present employer?______

AGENCIES, ORGANIZATIONS AND INDIVIDUALS INVOLVED IN DEVELOPING A VOCATIONAL EDUCATION PROGRAM

Agencies which may be involved in the development of a Vocational Education program include:

1. Vocational Education Advisory Boards.
2. Regional Office, New York State Employment Service.
3. The New York State Labor Department
4. New York State Commerce Department.
5. New York State Education Department.

Organizations which may be involved include:

1. Chamber of Commerce.
2. National Manufacturers Association, Regional Office.
3. American Society of Tool Engineers.
4. Other Industrial Management clubs.

Individuals who may be helpful are:

1. Guidance directors.
2. Members of the Chamber of Commerce.
3. Representatives of industry. Most valuable are those dealing with personnel and placement problems.
4. Union Representatives.

SECTION III

PROBLEMS IN ORGANIZATION
AND
SCOPE OF VOCATIONAL EDUCATION

ADMINISTRATION AND ORGANIZATION
OF
INDUSTRIAL EDUCATION

PROBLEM I
ADULT VOCATIONAL - INDUSTRIAL EDUCATION

City X is located in upstate New York. The population is 20,000. The surrounding area is predominately agricultural, although the city has a diversity of small industrial plants. The taxes are relatively low and there are excellent plant sites available. Transportation and other facilities are good.

These factors and others induced a nationally known metal products manufacturing company to locate a branch plant in City X. Key skilled craftsmen, maintenance men, etc. from the Home Plant will be transferred to City X after the facilities have been made available. The product developed by the company requires some 600 additional semi-skilled employees to work on small assembly units for the new product. The company does not intend to transfer any semi-skilled employees from the Home Plant, although the company is aware that products of a similar nature are not manufactured in City X. Based upon investigation, it believes there is manpower potential that can be trained in the skills required for their new product. The skills and jobs are such that women could also be trained and employed.

The company intends to solicit the help of any agency in City X that can help them solve their manpower problems. The Company will be willing to assist in providing any equipment, tools, etc. to do the training job.

As a local Director of Vocational Education, how would you be prepared to assist in the development of this training program? What are some of the necessary steps the Director must take in developing the program and coordinating his efforts with other agencies?

PROBLEM I

A Possible Solution

1. Determine if a formal request has been made to meet the needs of training workers for his company; if no request has been made, write to the Superintendent of Schools.

2. Invite a spokesman from the company to visit the school and bring information with him to determine:

    a. Occupations where training is required.

    b. Number of people to be trained

    c. Job specifications

        (1) Skills
        (2) Attitudes
        (3) Educational Requirements

3. Set up special advisory committee to meet the needs of Company X to determine:

    a. Approval of the suggested course of study

    b. Required instructional materials - What kind? How much?

    c. Required facilities - What kind? Where to secure?

    d. Budget - General and specific figures

    e. Teachers required - How many? Subject matter

    f. Duration of program

        (1) Classes meet from 4-11 p.m.
        (2) Duration of the program - 6 weeks

    g. Possible schedule - each night - 5 days a week

        (1) Related technical information - 1 hour
        (2) Specialized technical program - 5 hours

4. News release informing citizenry courses will be offered in order to train people in occupations that are in demand because a new company is moving into the community.

    At the same time, suggest that Company X issue a news release announcing that they are moving into the community. A representative of the company will be present on a specific date and will be hiring personnel to fill various vacancies.

Suggest that the company refer applicants to the school for training.

5. Present a resolution to the chief school administrator that the Board of Education shall offer the following courses:

    a. Specific related technical courses by name

    b. Specialized training courses by name

    c. List topical outline of courses

    d. List names of instructors to be hired

    e. List budget items

6. Send news release announcing starting dates of courses to all papers, radio and television newscasters.

7. Send out announcing posters to industries, employment offices, union halls.

To: The Chief School Administrator

From: The Chairman of the Vocational Advisory Committee

Subject: Recommendation for the Establishment of a Specialized Training Program.

1. Our school has been requested by Company X to help train about 600 semi-skilled workers to help meet its needs when it moves into our community.

2. After studying the request, we feel that this school can serve the community interest best by offering the following courses:

   a. Special Related Technical Courses

      1. Course I - Topical Outline
      2. Course II - Topical Outline
      3. Course III - Topical Outline

   b. Special Training Courses

      1. Course I - Topical Outline
      2. Course II - Topical Outline

3. The following people are available and willing to act as instructors:

   a. Instructor - Course
   b. Instructor - Course

4. The following is a suggested budget which we feel will cover expenditures and receipts for this venture for one year.

   a. Receipts

      1. State Aid - to be applied for
      2. Federal Aid - to be applied for through the state
      3. County and Vocational Extension Board (½ teachers salary up to $3,000.)
      4. Registration Fees
      5. Payment for supplies
      6.

   b. Expenditures

      1. Teachers' salaries
      2. Tools and equipment - no cost (to be provided by Company X)
      3. Materials

4. School overhead (light, heat, janitor service)
5. Guidance Service

5. The Vocational Advisory Committee recommends the establishment of this program.

PROBLEM II
ADMINISTRATIVE PROBLEM

A survey of community X, a central district high school, indicates the following:

This community is a residential area. It is predominantly lower middle class and some upper working class (skilled workers and tradesmen) plus a few wealthy families. The high school does not provide for any vocational programs; it does have some commercial courses. Employment opportunities are good within a 5 to 15 mile radius. There has been some influx of new industries. Job opportunities will increase only with training. Commercial and industrial establishments will support a vocational program. 25% of the high school students indicate interest in taking vocational courses. 15% of the boys and 33% of the girls go to work after graduation. High school population, grades 10 to 12, is 2300 students; about half are boys.

The Problem: Prepare a recommendation for the Chief School Administrator.

To: Superintendent of Schools

From: Director of Vocational Education

Subject: Proposal for a Vocational Program

Date: July 10, 1963

1. A student interest survey indicates 345 boys and girls are vitally interested in vocational education. There are 225 boys and 120 girls. Five percent of the total number of high school students (2300) are interested in technical education. This amounts to an additional 105 students.

a.	225 boys	vocational
b.	120 girls	vocational
c.	105 students	technical
Total	450 students	

2. An industrial survey indicates that there has been an influx of new industries. Employment opportunities are available to skilled or trained workers. This trend will accelerate in the future. Commercial and industrial establishments will support a vocational program and have identified

a shortage in the following occupations: automotive mechanics, electrical, machine shop, printing, radio-television, carpentry, cosmotology and practical nursing. There is a shortage of technicians in two fields: architectural drafting and electronics.

3. The plan of the following proposed program provides that a student will take the mandated subjects (English, social studies, science) plus three clock hours per day in an elected major sequence. This will enable a student to obtain a general high school education plus training in a skilled occupation.

The primary objective of the vocational-technical high school curriculum is preparation for useful employment in one of the skilled industrial or service occupations. However, these curricula are not necessarily "terminal" in nature. Many graduates may find an opportunity to continue their education in college, for their program has included most of the usual prerequisites for college entrance.

4. Scope of the Program:

Practical Nursing. This program will begin in the 11th year or 1964. This curriculum includes all the requirements for the New York State Board of Nurse Examiners qualifying Examination for Practical Nurses. In addition to nursing theory offered at school, clinical experience is scheduled in various local hospitals under the supervision of the school faculty.

Eleventh Year	Periods/week	Units
English II	5	1
American History	5	1
Elective (language or 11th yr. Math.)	5	1
Driver Education (Elective)	3	½
Nursing	20	2
Physical Education	2	
	40	5½

Twelfth Year	Periods/week	Units
English 12	5	1
Personal typing	5	1
Chemistry	7	1
Physical Education	2	
Study	1	
Nursing	20	2
	40	5

After graduation, the students are required to participate in a four months practical internship for 40 hours per week in the hospitals.

Cosmotology. Specialized training with modern equipment covers scientific care of hair and skin, waving, facials, manicuring and hair trimming. This curriculum covers all the license requirements of the State Board of Examiners. Seniors must complete the State License Examination as a requirement for graduation.

Tenth Year	Periods/week	Units
English II	5	1
World History	5	1
Mathematics 10 or Business Artitmetic	5	1
Personal Typing 1st term	5	½
Applied Art 2nd term		
Physical Education	2	
Beauty Lab.	18	2
	40	5½

Eleventh Year	Periods/week	Units
English III	5	1
Health I 1st term		
American History	5	1
Mathematics 11 or Science (elective)	5	1
Driver Education (elective)	3	½
Physical Education	2	
Beauty Lab	20	2
	40	5½

Twelfth Year	Periods/week	Units
English IV	5	1
Elective	5	1
Homemaking (Foods)	5	1
Small Business Management	3	½
Physical Education	2	
Beauty Lab.	20	2
	40	5½

Total Units (including Ninth Grade . . 21½

Vocational Curriculum for boys. This high school will offer six curricula for boys desiring preparation to enter the skilled industrial and service occupations of the community. Each of these is a three-year sequence, covering the 10th, 11th and 12th grades. The six programs are: Automotive, Electrical, Machine Shop, Printing, Radio-T.V., Carpentry.

This specialized shop program covers three full hours each day, which in the three year program totals 1800 hours of preparation. This portion of the work is taught by an instructor with at least nine years of industrial experience and with special training in teaching his subject.

Courses in applied science and related mathematics are also included, applying the principles of mathematics and science to the work of the student's specialty. Regents mathematics may be substituted if the student is looking forward to college entrance. A course in principles of business is offered to assist those graduates who may eventually go into business for themselves. In addition to the specialized courses, all students follow a program including all the usual high school requirements. Four years of English, three years of citizenship, the required courses in health and physical education are all included. There is opportunity for athletics, music, club work, and extra-curricular activities. Graduates, therefore, have completed all elements of a good general high school education.

Tenth Year	Periods/week	Units
English	5	1
World History	5	1
Mathematics (Regents or related)	5	1
Mechanical Drawing	3	½
Physical Education	2	
Laboratory Practise	20	2
	40	5½

Eleventh Year	Periods/week	Units
English	5	1
Mathematics (Regents or related)	5	1
Health & Applied Science	5	1
Principles of Business	3	½
Physical Education	2	
Laboratory Practise	20	2
	40	5½

Twelfth Year	Periods/week	Units
English	5	1
American History	5	1
Mathematics (Regents or related)	5	1
Driver Education or Mechanical Drawing	3	½
Physical Education	2	
Laboratory Practise	20	2
	40	5½

Total Units including 9th Grade 22

Technical Programs. The Electronics and Architectural Drafting program are designed to give students thorough preparation for employment as technicians or assistants to engineers.

The technical program is essentially the same, except the following will be substituted for three hours of shop work per day over the three year period:

Required subjects	Units
Architecture Drafting and Design	2½
Construction Theory	2
Strength of Materials	1
	5½

Required Related Subjects	Units
Elementary Algebra	1
10th Year Regents Math	1
11th Year Regents Math	1
12th Year Regents Math	1
Physics (Regents)	1
Chemistry (Regents)	1
	6

5. Physical Facilities:

Shop space requirements indicate approximately 20 students per shop for three clock hours.

Trade Areas	No. of Students	Shop	Instructor	Related Periods	Instr.
Automotive	50	1	1	2	
Electrical	40	1	1	2	1
Machine Shop	40	1	1	2	
Printing	36	1	1	2	
Radio	21	1	1	1	1
Carpentry	38	1	1	2	
Beauty Culture	80	2	2	4	1
Practical Nurse	40	2	2	2	
Electronics	65	1	1	3	1
Arch. Drafting	40	1	1	2	
	450	12	12		4

Space now available includes 6 class rooms and 6 shops. If the numbers and offerings do not increase this year, we will have sufficient space to start the program. Next year the space requirements will have to be doubled and the following year increased another third.

6. Cost (Estimated):

16 Full-time teachers (5,000.00 each)	$80,000.00
6 Shops	$300,000.00
6 Classrooms	18,000.00
1 Vocational Guidance Counselor	5,000.00
Total	$403,000.00

7. Financing the Program:

The cost of the program is reimbursable from State and Federal Aid funds. It is suggested the State Education Department be contacted in order to determine the exact amount.

PROBLEM III
ADMINISTRATIVE PROBLEM

Three school districts have voted to consolidate and form one large system. The combined enrollment figures for grades ten through twelve for the former high school districts, X Free Academy, Y Northside and W. High School are:

1958	10-12	1300
1963	10-12	1800
1966	10-12	2400

It has been decided that an Industrial Arts Program be developed and possibly some vocational and technical courses established.

You have recently been appointed as Director of Vocational and Practical Arts Education. The chief school administrator requests a proposal.

MEMORANDUM

To: Dr. George P. Washington

From: John Paul Jones

Date: July 12, 1963

Subject: PROPOSAL for an Industrial Arts and Vocational Education Program

1. A student survey indicates a need for an Industrial Arts program which includes courses in general metal, pringing, general woodworking, and electronics. 25% of the total enrollment in grades 10-12, or about 450 students, will take industrial arts.

2. Data indicates 12% of the boys will enter the vocational program (1963 - 216 students, 1966 - 288 students) and 5% of the boys will enter the technical program (1963 - 90 students, 1966 - 120 students) and 5% of the girsl will enter the vocational program (1963 - 90 students, 1966 - 120 students). The figures represent a total of 396 vocational students in 1963 and 528 by 1966.

3. A survey of the industrial and service establishments of this community indicates a need for trained workers in the following occupations: automotive mechanic, machinist, maintenance mechanic, electrical and chemical laboratory technicians, practical nursing and cosmotology.

4. Industrial Arts Program for X Free Academy: This school has an enrollment of 600 students for grades 10 through 12. The enrollment is expected to increase to approximately 800 students by 1966. The daily schedule provides for 7 55-minute periods. In 1963 the Industrial Arts program will accommodate 150 students. Class size will be 15 students; therefore, 10 classes will be necessary. Classes will meet for two periods per day for twenty weeks. Seventy-five students will be handled each term or 150 students during the year. This will require two Industrial Arts shops: (1) General Metalwork and (2) Industrial Arts Unit Printing.

   An Industrial Arts teacher can handle six periods a day; therefore, two teachers will be required. One teacher will teach three double period classes of printing. The second teacher will teach two double periods of metalwork and relieve the printing teacher for one period. As the enrollment increases, another class in metalwork will be initiated and each teacher will teach six periods. The class size will be increased to approximately sixteen or seventeen to accommodate the subsequent increase in enrollment.

5. Industrial Arts Program for Y Northside High School: This school accommodates grades 10, 11, and 12 with an enrollment of 600 students. The schedule calls for seven fifty-five minute periods. The plan provides Industrial Arts courses for 150 students, 10 classes of 15 students each, two periods per day for twenty weeks. Seventy-five students will be handled each term or 150 students during the school year. Two Industrial Arts shops will be required: (1) General Metal and (2) Industrial Arts Unit Electronics.

   Two Industrial Arts teachers will be required.

   The expected student population will increase to 800 in 1966. The enrollment in the Industrial Arts courses will increase to 200, or an addition of fifty students. An additional class can be given in electronics and the class size will be increased to accommodate the remaining students.

6. Vocational Education Program at W. High School: This school will have a total enrollment of 600 students for grades 10 through 12; by 1966 it is expected to increase to approximately 800 students. The school day will consist of nine 45-minute periods.

With the addition of Vocational and Technical Education programs to the present curriculum, it can be classified as a comprehensive high school.

According to detailed data stated in paragraph two of this report, 216 boys will enter vocational programs in machine shop, electrical, and automotive trades. An additional 90 boys will enter the technical programs in electrical and chemical technology. 90 girls will take programs in practical nursing and cosmotology.

The vocational boys' program will consist of nine classes of twenty-four students in 1963 and will increase to twelve classes of twenty-four students by 1966. The vocational girls' program will consist of six classes of fifteen students in 1963 and will increase in class size from fifteen to approximately twenty-two by 1966. The technical boys' program will consist of six classes of fifteen students in 1963 and class size will be increased to approximately twenty students per class by 1966.

7. The vocational-technical program will require:

2 Machine Shops
2 Electrical Shops
2 Automotive Shops
1 Industrial Chemistry Laboratory
1 Cosmotology Salon
1 Practical Nursing Center
1 Drafting Room
1 Strength of Materials Lab and Classroom
1 General Classroom

The following teachers will be required:

2 Teachers of Machine Shop Practices
2 Teachers of Electricity
2 Teachers of Automotive Practices
1 Teacher of Industrial Chemistry
1 Teacher of Cosmotology
1 Teacher of Practical Nursing
1 Teacher of Drafting
1 Teacher of Related Math
1 Teacher of Technical Science

8. Where to Obtain Staff.

A. Industrial Arts teachers may be recruited from applications on file in the Superintendent's personnel office or previous student teachers, Industrial Arts Teachers College, and Teacher's Placement Agency.

B. Trade, technical and related trade teachers may be recruited from a Regional Industrial Teacher Training Center or from local industries.

C. Some basic qualifications to consider are:

1. Does applicant meet minimum certification requirement?
2. Check references.
3. Does he possess desirable personality traits?
4. Does the candidate realize he will be expected to meet State certification requirement by taking approved courses at the Regional Teacher Training Center.

9. Teacher Assignments.

A. There should be enough qualified teachers for the program.

B. Each teacher should have a sufficient load to justify his salary.

C. Number of different preparations should be kept to a minimum.

10. Capital Outlay Estimate.

X Free Academy	
General Metalworks Lab.	$ 23,000.00
Unit Print Shop	15,000.00
Y Northside	
General Woodwork Shop	12,000.00
Unit Electronics Shop	18,000.00
W High School	
2 Vocational Machine Shops	200,000.00
2 Vocational Electricity Shops	40,000.00
2 Vocational Automotive Shops	70,000.00
Industrial Chemistry Lab.	15,000.00
Cosmotology Lab	10,000.00
Strength of Materials Lab.	30,000.00
Drafting Room	5,000.00
Annual budget estimated for supplies for the above shops	30,000.00
Total	$468,000.00

11. Adult Education: Any number of trade extension or specialized industrial training programs should be set up for the benefit of the community at large. The courses and services would lead to the development of skills or technical knowledge, to meet the needs of adults. The adult education program should be developed through the cooperative efforts of the Advisory Board, Unions, Employees Service organizations and other community groups.

The training could be provided, using the existing school facilities in the evening. In some cases, it may be possible to render an educational service by conducting training programs using the employer's local plant facilities.

DAILY SCHEDULE

	Mr. A Machine Shop	Mr. B Machine Shop	Mr. C Cosmo.	Mr. D Pract. Nurse	Mr. E Elec.	Mr. F Elec.	Mr. G Auto	Mr. H Auto	Mr. I Chem.	Mr. J Draft	Mr. K Rel. Math	Mr. L Rel. Science
1	Mach. 10 101	Mach. Tech 10 102	Cosmo 10 103	P.Nur. 11 104	Elec. 10 105	Elec. 12 106	Auto 10 107	Auto 12 108	Tech Chem 10 109	Mach 11-12 110	Mach. 11	Mach. 12
2	↓	↓	↓	↓	↓	↓	↓	↓	↓	Auto 11	Elec. 11	Tech Mach 12
3	↓	Mach. Tech. 11-12 102	↓	↓	↓	↓	↓	↓	Tech Chem 10	Tech Mach 10	Auto 11	Cosmo. 12
4	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	Auto 10	Nurs. 12
5	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch
6	Mach 11 101	Mach 12 102	Cosmo 11-12 103	P.Nurs. 12 104	Elec. Voc. 11 105	Tech. Elect. 11 106	Auto 11 107	Auto 10 108	Tech. Chem. 11 109	Tech. Mach. 11-12 110	Mach. 10	Voc. Elect. 12
7	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	Elec. 10	Auto 12
8	↓	↓	↓	↓	↓	Tech. Elect. 12 106	↓	↓	Tech. Chem 12 109	Mach. 10	Auto 10	Att.
9	↓	↓	↓	↓	↓	↓	↓	↓	↓	Auto 10		

PROBLEM IV
ADMINISTRATIVE PROBLEM

Your community has experienced considerable industrial development. New plants have been built, old companies have changed products and manufacturing procedures. Change has been the dominant factor in industry. The most pressing problem, particularly in the smaller plants is one of developing foremen and supervisors on the lower level and technicians who have the knowledge to act as liaison between the engineering and laboratory departments and the production departments. Industries include chemicals, electronics, heavy construction machinery and precision tools.

As a local administrator of Vocational Education, you know of this situation. While individual organizations have approached you for help, no formal requies for help has been made. What steps and procedures would you follow to:

A. Offer the services of the adult program.
B. Determine what specifically can be done to provide assistance.
C. What would be the nature of the program offered?
D. How would you avail yourself of the assistance of the New York State Education Department?

A Solution.

1. Director of Vocational Education obtains more detailed information from involved company presidents.

2. This problem becomes part of an agenda in an advisory committee meeting.

3. The Director of Vocational Education informs the committee of the availability of facilities and instructors.

4. A recommendation to the superintendent is formulated.

5. The State Education Department should be contacted in relation to this problem and requested to review the proposal and submit any suggestions to the superintendent. The Director should ask for information concerning available funds for which the school might apply to carry on such a program. Formal approval should also be requested.

RECOMMENDATION

Date: July 14, 1963

To: Superintendent of Schools

From: Director of Vocational Education

Subject: Recommendation from the Advisory Committee of Vocational Education Regarding a Community Problem.

Recommendation:

In order to develop foremen, supervisors and technicians for Companies x, y, and z, it is recommended that our adult education program be expanded to provide extension trade education.

Mr. Q, Electronics teacher, is willing to teach a training course according to company objectives for two evenings per week for two semesters to upgrade approximately 34 company employees for technician positions.

Our school psychologist, Dr. P., has also agreed to conduct foreman and supervisor training classes in human relations for the heavy construction and precision tool company employees.

The Advisory Committee felt that the addition of these courses was a step forward in the right direction and would best meet the man-power needs in our community.

Since this program would be classified under extension courses, considerable State Aid would be available.

Facts of the problem:

Our community has experienced considerable industrial development. New plants have been built, old companies have changed products and manufacturing procedures. Change has been the dominant factor in industry.

The most pressing problem, particularly in the smaller plants is one of developing foremen and supervisors on the lower level and technicians who have the knowledge to act as liaison between the engineering and lab departments and the production departments. Industries include chemicals, electronics, heavy construction machinery and precision tools.

(Formal answer of Superintendent of Schools to Company Presidents.)

Date: July 31, 1963

To: Mr. Company President

From: Superintendent of Schools

Dear Mr. X,

At the meeting of the Board of Education a recommendation from the Vocational Advisory Committee was unanimously accepted. It was recommended that our Adult Education program be expanded to provide extension trade education to develop foremen, supervisors and technicians for your firm.

Two members of our staff, Mr. Q, our Electronics teacher, and Dr. P., Chief of Special Services, have agreed to teach two evenings per week for the following year, commencing September 29. Classroom space is available in the new annex of the technical building.

The responsibility for initiating the program has been delegated to the Director of Vocational Education and the Advisory Committee.

For further information, feel free to call the Director of Vocational Education at CE 9-8876.

Very truly yours,

Superintendent of Schools

PROBLEM V
ADMINISTRATIVE PROBLEM

A. The Problem:

What proposal should be made concerning the number and type of Industrial Arts offerings in high school?

B. Facts:

A high school has 720 students, 385 of whom are girls and 335 are boys. The community consists of middle and upper middle class income people engaged in business and professional occupations.

Of the high school graduates, 80% go on to further training. 15% of the students are below average ability, while the drop-out rate is 5% of the total high school population.

The Junior High Schools feeding this school have good industrial arts programs with curriculums including good general unit shops and a transportation shop.

C. A Proposal.

Date: July 10, 1963

To: Superintendent of Schools

From: Director of Vocational Education

Subject: A Proposal for a High School Industrial Arts Program

In our world of science it is important for our youngsters to understand about tools, materials and processes of industry. It is important that they be given every opportunity to learn to use these tools and materials first hand. Academic courses are only part of the process of educating the whole child.

An Industrial Arts sequence in high school can be offered for regents credit as readily as any academic subject. As an elective, industrial arts will enrich the high school program and widen the field of experiences preparatory to further education.

1. Regents Credit. Providing an Industrial Arts sequence has been approved by the Bureau of Industrial Arts, the school may apply for regents credit for its Industrial Arts courses without the necessity of a regents examination. This credit can be applied toward college entrance requirements.

2. How many boys do we have to plan for? Out of 335 boys, 15% or 51 boys are "Special Class" students requiring a special program to meet their needs. This will be discussed later. Of the remaining 284 boys, 20% will elect an Industrial Arts course. This figure has been arrived at through general experience all over the state. In actual figures, this means 57 boys.

   It has been estimated that our high school "drop-out" rate is now 5% of the high school population. Because Industrial Arts will appeal to many in this group, we have included their numbers as possible Industrial Arts students. So we can figure on all 57 boys taking part.

3. Industrial Arts Curriculum. In order to receive regents credit for an Industrial Arts sequence in high school, a student must obtain 1 unit of credit for a year of General Comprehensive Shop, and 1 unit of credit for each of two other unit shops offered in the high school. The 9th grade General Comprehensive Shop may be considered for 1 unit of credit in this sequence.

   General Comprehensive Shop 1 Unit
   plus any two of the following:

Unit Wood	Unit Transportation	Unit Textiles
Unit Metal	Unit Ceramics	Unit Electricity

   In order to establish a regents approved sequence in Industrial Arts, we must set up unit shops in the high school program.

4. To Implement This Curriculum. In order to implement this regents program we must:

   a. Set up one Industrial Arts Shop to house equipment, tools and materials aimed at handling 3 unit shops.

   b. These unit shops should be:

      1. General Woodworking
      2. General Metalworking
      3. Transportation

      These are the three major areas which will become the backbone for future unit shop expansion when the need arises.

5. Cost:

   a. The cost of this program, as part of general education, will have to be born by the local community.

   b. The salary of one teacher will be needed.

c. $20,000 to $30,000 will be needed to set up one shop with the tools and equipment needed to carry out 3 unit shop programs.

d. Provision will have to be made for supplies annually. The Bureau of Industrial Arts suggests that 8¢ per pupil, per period, per day, for the school year would be a fair formula to follow.

i.e. 57 students x .08 x 2 periods x 180 days = $1641.

6. Teacher Certification: A teacher of Industrial Arts shall complete a four year approved curriculum leading to a baccalaureate degree and hold a provisional or permanent certificate to teach in the secondary schools of New York State. (A)

7. "Special Class Students. Those students with below average ability pose a real problem in the Industrial Arts program. Experience has shown that a few activities in shop may be used with this group but the danger of having this group around machines and power equipment is a real safety hazard.

A program of low ability students would involve the following:

a. Instruction in the general area of education.

   1. The communications skills
   2. The computational skills
   3. The information and knowledge required for good citizenship.

b. Instruction in special areas such as:

   1. Arts and crafts
   2. Art
   3. Music
   4. Industrial Arts shops - simple repetitive tasks

In "a." above, the teacher in this general area would instruct them for at least three hours.

In "b." above, students may be assigned to this area of interest for varying periods of time.

(A) The University of the State of New York, State Education Department, Certificates for Teaching Service. Certificates valid for teaching shop subjects (Industrial Arts). Albany, New York, 1940: p. 2.

PROBLEM VI
ADMINISTRATIVE PROBLEM - SCHEDULING

Introduction.

One of the many responsibilities of a Director of Vocational Education is that or organizing the Vocational program. Scheduling is one phase of this organization. "It is now generally recognized that the making of a satisfactory schedule is one of the first tests of the competence of a principal or director. That this duty has not always been carefully or even properly done is attested by confusion in many schools on the opening day of the term."[1] The construction of a sound schedule is very time-consuming but, when it has been completed, it makes for a smooth, efficient school operation.

A schedule should be designed to incorporate any special abilities the teacher may have and make provisions for meeting the needs of any special groups of students. It should facilitate an effective pupil personnel services program and provide for maximum utilization of classrooms, shops and laboratory space.

The schedule helps determine the size of staff, the extent of extra-curricular activities and other school assignments for instructors. It provides a check on teacher load and a check to see that all courses are being taught. It acts as a group or individual locator for people within the school. A good schedule shows teachers and students a total picutre of their daily school life by giving teachers information on room assignments, subjects to be taught and groups that are assigned to them. Room assignments and subjects they will take are spelled out for students.

To show the details that are involved in making up a schedule, a problem in scheduling has been resolved as follows:

The Problem.

1. Design the schedule in a vocational program for tenth, eleventh and twelfth grade boys and girls in the areas listed below.

2. Schedule only the shop and related technical information classes.

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1. Jacobsen, P. B., W. C. Reaves, and J. D. Logsdon, Duties of School Principals. New York: Prentice-Hall, Inc., 1950. p. 81.

3. Determine the number of shop and related teachers needed for the total estimated enrollment listed below.

4. Information:

   a. Shop classes meet for four 45-minute periods. All shop teachers will have a load of two 3-hour classes per day.

   b. Related subject teachers will have a load of five 45-minute periods per day and not more than two different subject preparations.

   c. Class size will be approximately 22-24 students.

   d. The students in Food Trades and Commercial Art will take Business Arithmetic instead of Related Technical Drawing.

   e. Beauty Culture students will take Art instead of Related Technical Drawing.

   f. There will be one lunch period per day - 5th period.

   g. Preliminary registration of the ninth graders and the present sophomores and juniors are listed in the chart below. The chart shows the total anticipated enrollment for each trade area.

COURSE	Grade		
	10th	11th	12th
Auto Mechanics - Boys	20	17	15
Beauty Culture - Girls	20	16	15
Commercial Art - Boys	6	4	4
Girls	8	8	6
Dressmaking - Girls	16	13	12
Electric - Boys	20	16	12
Foods - Boys	8	6	5
- Girls	12	9	8
Machine Shop - Boys	16	14	13
Radio - Boys	15	12	14
Wood - Boys	20	18	16
Total - Boys	105	87	75
Total - Girls	56	46	41
Grade Total	161	133	116
School Total	410		

h. Information received from the guidance department shows that there are 20 students who have superior verbal ability and 15 students who have below average verbal ability. These are in the sophomore class. A special class in English will be provided for each group to meet their special needs.

i. Typical classes for the indicated grade are:

10th grade -	English II	5 periods/week
	World History	5 periods/week
	Health	3 periods/week
	Gym	2 periods/week
	Related Tech. Drawing	5 periods/week
	Elected Shop	20 periods/week
	Total	40 periods/week

11th grade -	English III	5 periods/week
	Related Tech. Math	5 periods/week
	Physical Education	5 periods/week
	Elective	5 periods/week
	Elected Shop	20 periods/week
	Total	40 periods/week

12th grade -	English IV	5 periods/week
	American History	5 periods/week
	Related Tech. Science	5 periods/week
	Elective	5 periods/week
	Elected Shop	20 periods/week
	Total	40 periods/week

The Solution.

1. From the tabulated data it is a simple matter to determine the number of class sections that will be needed for related subjects by dividing the number of preliminary registrations by the desired class size. For the shop sections some of the junior class will be assigned in the morning classes of the 10th grade and some in the afternoon classes of the 12th grade for the respective shops.

   From the number of sections of related and shop classes necessary to accommodate the pupils, it is possible to determine the size of the teaching staff. Staff requirements would be:

Shop:	Automotive	1 teacher	
	Beauty Culture	1 teacher	
	Commercial Art	1 teacher	
	Dressmaking	1 teacher	
	Electricity	1 teacher	
	Food Trades	1 teacher	
	Machine Shop	1 teacher	
	Radio	1 teacher	
	Wood	1 teacher	
	Total Shop teachers		9 teachers
Related Subjects			3 teachers
Total Teaching Staff Required			12

2. Space Requirements. The two special English classes will be scheduled in the high school building. The same would be true of Art for the Beauty Culture students. Facilities required in the Vocational Building would be:

Classrooms: One special laboratory would be required for science, which would double as an extra classroom. One drafting room would be needed and this too would double as a classroom. Another classroom would be required.

Science Lab/classroom	1
Drafting room/classroom	1
Classroom	1
One shop for each of the nine shop areas offered	9
Total shops and classrooms	12

3. The Schedule.

RELATED TEACHER	1st Period	2nd Period	3rd Period	4th Period	5th Period	6th Period	7th Period	8th Period	9th Period	Room No.
Mr. Mazur	Rel. Science 12	Rel. Scie. 12	Rel. Science 12	Rel. Scie. 12	Lunch			Rel. Math 11		101
Mr. Lankalis		Rel. Math 11			Lunch	Rel. Drawing 10	different sections → each period			102
Mr. Gulumian	Rel. Math 11	Rel. Math 11		Rel. Math 11	Lunch	Rel. Math 11		Bus. Arith. 10		103

SHOP TEACHER	1st Period	2nd Period	3rd Period	4th Period	5th Period	6th Period	7th Period	8th Period	9th Period	Room No.
Auto. Mr. Eddy	Grade 10 20 boys		Grade 11 6 boys	Total 26	Lunch	Grade 11 11 boys	Grade 12 15 boys		Total 26	11
Beauty Mrs. Beaulac	Grade 10 - 11 Tot 20 6 26 Girls				Lunch	Gr. 11-10 girls Gr. 12-15 Girls Total 25 Girls				12
Commercial Art Mr. Brunelle	Grade 10 6 boys 8 girls		Grade 11 1 boy 3 girls	Total 18	Lunch	Grade 11 3 boys 5 girls	Grade 12 4 boys 6 girls		Total 18	13
Dressmaking Miss Stitch	Gr. 10 - 16 Gr. 11 - 5 Tot. 21 girls				Lunch	Gr. 11 - 8 Gr. 12 - 12 Tot. 20 girls				14
Electricity Mr. Harriman	Grade 10 20 boys	Grade 11 4 boys		Total 24	Lunch	Grade 11 12 boys	Grade 12 12 boys		Total 24	15
Foods Miss Spoon	Grade 10 8 boys 12 girls	Grade 11 4 boys		Total 24	Lunch	Grade 11 2 boys 9 girls	Grade 12 5 boys 8 girls		Total 24	16
Machine Shop Mr. Aldrich	Grade 10 16 boys		Grade 11 6 boys	Total 22	Lunch	Grade 11 8 boys	Grade 12 13 boys		Total 21	17
Radio Mr. Cady	Grade 10 15 boys		Grade 11 4 boys	Total 19	Lunch	Grade 11 8 boys	Grade 12 11 boys		Total 19	18
Wood Mr. Tewksbury	Grade 10 20 boys		Grade 11 7 boys	Total 27	Lunch	Grade 11 11 boys	Grade 12 16 boys		Total 27	19

Problem VII
Administrative Problem

A comprehensive high school has twenty students who are interested in a Cooperative Work-Study Education Program. There are no Vocational Education facilities available. There are two industrial arts teahcers, one has a light teaching load of three periods a day and other assigned duties. The community shows an interest in a co-op program. You are the Director of Vocational Education. Prepare a recommendation to the Chief School Administrator.

To: Superintendent of Schools
From: Director of Vocational Education
Subject: Proposal for a Cooperative Work-Study Education Program
Date: July 8, 1963

1. A student interest survey indicates 20 students are vitally interested in an industrial co-op program. Since there is no Vocational program available and the interest is in diversified occupations the following proposal is made. The expressed need cannot be met with existing high school programs. This program is directed toward those students who can profit from its experience for gainful employment after high school graduation, not for those seeking part-time employment during high school.
2. A survey indicates there are sufficient cooperating employers interested in this program to place all students in commercial and industrial establishments for their occupational training. There are employemnt opportunities for high school graduates who complete the co-op program.

3. The plan of the program provides a student will take the mandated subjects plus related information during the first half of each school day, the elective subject (occupational training) will be taken during the remainder. This represents the minimum state requirements of 15 hours of occupational training per week for 40 weeks.

4. This program requires a qualified coordinator. Mr. X, an industrial arts teacher of the high school staff is qualified and interested in handling this assignment. His schedule would permit him to teach his three regular industrial arts classes plus a related trade information class for the co-op students and allow him to superivse student-on-the-job training in the afternoon. When the program is expanded to include a greater number of students, it will require the services of a full time coordinator.

5. The estimated cost of this program will be as follows.

a.	Compensation for additional responsibilities for Mr. X.	$600
b.	Travel expenses	200
c.	Instructional material for 20 students	200
d.	Telephone	100
e.	Postage	50
	Total	$1150.00

6. Since this is a Vocational program, it is possible to obtain State and Federal Aid to finance the program. A contact with the State Education Department should be made to determine any financial reimbursement.

CENTRAL CITY SENIOR HIGH SCHOOL

CENTRAL CITY, NEW YORK

COOPERATIVE TRAINING

PARENT CONSENT

Subject: Date:

Board of Education
Union Free School District No. 7
Town of Central City
Central County, New York

Gentlemen:

I hereby consent to having my son/daughter ________________ participate in a cooperative course of training in which the school will be assisted by ________________________. Under this plan I understand that he/she will spend a portion of his/her time in the above mentioned establishment for the purpose of receiving practical experience.

In consideration of your permitting my child so to participate I hereby agree to assume all liability for any injury to said child arising out of such participation including first aid medical treatment, and I agree to hold you or any employee of yours harmless against any claim or liability on account thereof.

It is not intended hereby to release any claim which I may have against persons other than employees of the Central City School District for negligence.

Signature of Parent

INDUSTRIAL COOPERATIVE PROGRAM

PUPIL AGREEMENT FORM

Date: ________________

I wish to study the trade of ____________________________________ in the Industrial Cooperative Program.

I understand that, if I am accepted for this program,

1. I will complete at least a total of 600 hours per year of actual employment by the end of the school year, and regardless of hours will work on my designated job until school closes in June.
2. I should complete more than the required minimum hours on the job in order to obtain the greatest benefit from the program, and that it will be necessary for me to work Saturdays in order to meet the hour requirements.
3. I may elect the program for one school year, earning two units of credit, or for a major sequence, four units of credit, I must complete two academic years of part-time employment, and two academic years of Related Instruction.
4. I can not earn less than two units of credit.
5. I will receive one grade each quarter for both the Related Instruction and job training.
6. I must obtain the following:
    a. My parents written consent.
    b. Working papers
    c. A Social Security number
7. I will be considered as an employee of the firm for which I am working and will be covered by workmen's compensation by the employer while at work. I will not be eligible for unemployment compensation.
8. When at work I am an employee and am subject to the rules and regulations of my employer, as well as those of the school.
9. I am responsbile for holding my job through high standards of promptness, regularity, and diligence.
10. I must notify both the school and my employer, as soon as possible, if at any time I am not able to appear at work.
11. My attendance at work is governed by the same regulations as govern school attendance.
12. I must cooperate with the coordinator, and my employer.
13. My school day will be fully occupied in this program, and to do satisfactory work I will need to arrange some studying time at home each school day evening.
14. I will limit my extracurricular activities because of the time involved in this program.
15. I will be paid for my work at a minimum of \$.50 (fifty cents) per hour, and that I may earn raises in salary as my work improves in the judgement of the employer.
16. I must report, immediately, any difficulties I may have at work with my employer or fellow employees, to the coordinator.
17. I must keep an accurate daily record of work done, and time spent on each type of work.
18. I will provide my own transportation or ride with another student with permission of my parents, his parents, and the school.

Signed: ______________________________
Pupil

Witness: ______________________ ______________________ ______________________
Principal Coordinator Counselor

COOPERATIVE WORK-STUDY EDUCATION
GREAT NECK HIGH SCHOOL
GREAT NECK, NEW YORK

Student Obligation and Parent Consent

Opportunities are available to young people in the industrial and business places of our community, but only to those who are earnest in their efforts to receive training. It is important, therefore, that each student know what the employer and the school expect of him.

Donald R. Heck, Coordinator

STUDENT

I Am Aware That:

1. My obligation to the school does not end when I leave for work. The time spent at work is a school function for which credit toward graduation is given, and I am subject to all school regulations.

2. I must not leave the job without first consulting the school.

3. I will attend work and school regularly and punctually.

4. I will notify my employer, as soon as possible, if I am unable to report for work.

5. I must demonstrate a conscientious attitude toward both on-the-job duties and in-school assignments.

6. I must comply with any reasonable request, order or recommendation that my employer gives me, as long as I am not asked to do something that is dangerous or illegal.

7. I must observe all safety regulations at my place of work at all times.

8. As a representative of Great Neck High School, any failure on my part will not only injure myself, but will harm the reputation of the cooperative work-study program and all other high school students.

I understand the program and agree to accept the responsibilities outlined above.

____
(student)

PARENT

I consent to have ______________________________ enter the Cooperative Work-Study Education Program and I agree to cooperate with the school and the training agency.

____
(parent or guardian)

BECOMING FAMILIAR WITH CERTIFICATION AND TEACHER IMPROVEMENT

Certification

1. Certificates valid for teaching Shop Subjects (Industrial Arts).

" 'Shop Subject' means a subject designed to explore a pupil's interest in, to discover his vocational aptitudes toward, and to provide him with general information about" certain shop subjects, "and such other similar subjects as may be offered in the public schools".[1]

"The candidate shall have completed a four-year approved curriculum leading to the baccalaureate degree including:

"18 semester hours in professional courses approved for teaching in public schools.

"36 semester hours in approved courses related to the field of industrial arts."[2]

"The provisional certificate shall be valid for ten years from date of issuance."[3]

Permanent certification may be awarded upon completion of 30 semester hours of approved advanced courses.

2. Certificates Valid for Teaching a Shop Subject (Trades).

"'Shop Subjects (trades)' means a subject designed to prepare students for useful employment in a trade or industrial occupation such as: bricklaying, etc., and such other similar subjects as may be offered in the public schools."[1]

"The candidate shall have completed an approved program of education leading to high school graduation and, in addition, 32 semester hours in approved courses for teachers of shop subjects (trades)."[5]

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1. The University of the State of New York, Certificates Valid For Teaching Shop Subjects (Industrial Arts). Albany, New York, 1954. p. 1.
2. Ibid. p. 1.
3. Ibid. p. 2.
4. The University of the State of New York, Certificates Valid for Teaching A Shop Subject (Trades), Albany, New York, 1956. p. 1.
5. Ibid. p. 1.

> "The candidate shall have completed at least five years of approved and appropriate journeyman or apprenticeship experience in the trade or industrial occupation for which the certificate is to be issued, or graduate from a vocational school."[1]

> "The provisional certificate shall be valid for ten years from date of issuance."[2]

Permanent certification may be awarded upon the completion of 30 semester hours of approved courses in addition to the minimum standards of preparation required.

3. Certificates Valid For Teaching a Technical or Related Technical Subject.

"'Technical subject' means a subject designed to prepare pupils for useful employment in a technical occupation such as: architectural drawing", etc., "and such other subjects as may be offered in a vocational school; 'related technical subject' means a subject specifically related to a trade or technical occupation such as: mechanical drawing.....and such other similar subjects as may be offered in a vocational school."[3]

> "The candidate shall have completed an approved four-year program of study in architecture, art, engineering or applied science leading to an appropriate degree, including 18 semester hours in professional courses approved for secondary school teaching, twelve of which may be completed within three years from the date of issuance of the certificate; otherwise the time validity of said certificate shall terminate."[4]

> "The candidate shall have completed at least three years of approved experience related to the technical subject for which the license is to be issued. One year of graduate study may be accepted in lieu of one year of experience."[5]

> "The provisional certificate shall be valid for ten years from the date of issuance except as heretofore provided."[6]

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1. The University of the State of New York, Certificates Valid for Teaching a Shop Subject (Trades), Albany, New York, 1956. p. 2.
2. Ibid., p. 2.
3. The University of the State of New York, Certificates Valid For Teaching A Technical or Related Technical Subject, Albany, New York, 1954. p. 1.
4. Ibid., p. 1.
5. Ibid., p. 2.
6. Ibid., p. 2.

Permanent certification may be awarded if the candidate completes a five year program of study in his field including 18 hours in professional courses approved for secondary school teaching.

4. Certificates Valid For Teaching A Special Subject.

"'Special Subject' means one of the following: agriculture, art, commerce, health, homemaking, library, music, physical education and hygiene, recreation, speech and such other similar subjects as may be offered in the public school."[1]

> "The candidate shall have completed an approved four-year curriculum leading to the baccalaureate degree including:
>
> " "18 semester hours in professional courses approved for public school teaching; and
>
> "36 semester hours in appropriate technical courses in the subject for which the certificate is to be issued."[2]

Business teachers must present proof that they have completed a minimum of one year of approved and appropriate experience in a distributive occupation.

Permanent certification may be awarded upon completion of 30 semester hours of approved advanced work. This must be completed within a ten year period.

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1. The University of the State of New York, Certificates Valid for Teaching A Special Subject, Albany, New York: 1956, p. 1.
2. Ibid., p. 1.

THE DEVELOPMENT OF PROCEDURES FOR TEACHER APPRAISAL OF PROFESSIONAL COMPETANCE

Evaluation of staff performance is essential in determining the effectiveness of the program. The local supervisor has the responsibility for arranging and carrying on various types of evaluation. Mere rating based on classroom or shop observation along is not satisfactory evaluation. Evaluation must embody the collecting of evidence concerning the growth toward objectives that were originally established, making judgments regarding the evidence, and revising methods and procedures or objectives in the light of the judgment.

The score made by students on achievement tests, the number of job placements of graduates from a trade course, the self-evaluation made by the teacher of their work, the check list made by the supervisor following observation of the class in action, reports from employers of graduates, all are tools used in evaluation. No one of these tools alone is sufficient. All should be considered and used as necessary in making final judgment preliminary to adjustment.

Many supervisors use a check list or some type of rating form to record observations made during a visit to the shop or classroom. These are effective only in so far as they are used properly. If a check list encourages further confidence between teacher and supervisor that will lead to improvement without causing friction and antagonism, it is justified. The check list should be discussed in group conferences and thoroughly understood by all before it is used. As evaluation plan that can be used by the supervisor and also by the teacher for self-evaluation has much to recommend it from the standpoint of encouraging mutual agreement and helpfulness.

EVALUATION REPORT FOR CLASSROOM TEACHERS

Name______________________________ Date____________________

Subject or Grade____________________

School______________________________

Instructional Skill & Classroom	Needs Improve	Satisfactory	Above Average	Superior
1. Knowledge of subject matter				
2. Development and use of effective instructional technique				
3. Effective pupil evaluation				
4. Provision for individual differences among pupils				
5. Variation in materials and teaching techniques				
6. Consistent and careful planning in accordance with authorized course of study				
7. Organization and effective direction of pupil activities				
8. Ability to maintain good class control				
9. Rapport with pupils				
10. Physical classroom environment				
11. Instructional classroom environment-valuable and pleasant surroundings				
12.				

Comment:

PERSONAL CHARACTERISTICS	Needs Improve	Satisfactory	Above average	Superior
1. Grooming and general appearance				
2. Apparent physical health & energy				
3. Apparent emotional and social adjustment				
4. Interest and enthusiasm about work				
5. Use of good judgment				
6. Voice and speech				
7.				

Comment:

PROFESSIONAL ATTITUDES AND GROWTH

	Needs Improve.	Satisfactory	Above average	Superior
1. Observance of ethics of the teaching profession				
2. Effort made to improve classroom methods and techniques				
3. Response to supervision and suggestions for improvement				
4. Relationship with other school personnel				
5. Willingness to share in all school responsibilities				
6. Promptness and accuracy with reports				
7. Conformance with authorized policies and procedures				
8.				

Comment:

Teacher-Community Relationships

1. Relationship with parents
2. Participation in school related organizations
3. Effectiveness in interpreting the school program

4. ....

Comments:

GENERAL EVALUATION

Considering total effectiveness in guiding pupil growth, I believe this teacher should be rated:

Needs Improvement	Satisfactory	Above Average	Superior

I feel that the possibility of meeting standards for tenure is:

Poor......Questionable......Fair......Good......Exeellent......

Supervisor

Teacher

Signature indicates that the teacher and principal together discussed this report. It does not necessarily denote agreement with all factors of the evaluation.

Principal

PROCEDURE AND METHODS OF TEACHER IMPROVEMENT

A professional staff member should be encouraged to continue his education by taking In-Service training courses in the local school or in nearby colleges or universities. This is a means of "up-grading" the teacher by way of "refresher" courses. Getting back to industry from time to time in another effective means of up-dating training.

Many school systems allow credit on the salary scale for courses taken beyond the bachelor's degree. In order to receive such credit, the teacher must submit to the superintendent, approximately one week before the beginning of the course, an application for prior approval of the course.

In order to receive such credit, the course must be directly related to his present assignment as a teacher or administrator. Also, that the course has relevance to, and value in, the present assignment of the staff member.

Application for such credit should be made to the superintendent of schools (in writing) as soon as the course has been completed.

Frequently the in-service training program centers around a workshop. These take the form of informal organizations employing the services of a resource person to aid in discussions leading the participants to gain information and knowledge on one or more topics. Another type of workshop is the "original development" type where mature persons interested in a specific problem get together and try to work out an original solution.

Workshops may be used for credit or, at times, only to arrive at a solution to a prominent situation problem crying to be solved.

Among the advantages claimed for the workshop are:

1. It is concerned with the felt needs and problems of participants.

2. The participant develops individually, socially, and emotionally as well as professionally.

3. It provides an opportunity for participants to make a constructive contribution on the educational frontier.

4. It provides a means of supplying more practical assistance to field workers.

5. It provides easy access to competent assistance.

6. It provides a democratic large group-individual attack upon educational problems.

7. It furnishes a stimulus to continued professional growth in service.

8. The materials and ideas developed in workshops are useful in school situations.

"......summer workshops, either in the community in which the teacher works, or at a university center, with the teacher paid a regular salary is the ideal way to conduct workshops."[1]

The following are a few other methods employed to stimulate teacher improvement:

1. Induction of new teachers to make sure they get off to a good start and learn early where to turn for assistance.

2. Plant visitation to learn the resources in the community which they may use.

3. Professional reading, writing, and study.

4. Experimental studies carried on in the classroom.

5. Participation in professional associations.

6. Gathering and studying publications related to the subject field.

7. Participation in research and survey projects.

8. Part time and vacation employment for keeping trade skills up to date.

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[1] Jacobson, Paul B., William C. Reavis, & James D. Logsdon, Duties of School Principals, New York, Prentice-Hall, Inc.: 1950. Second Edition, p. 502.

SECTION IV

ADMINISTRATIVE POLICIES AND PRACTICES

EDUCATIONAL POLICY

The objective of this school is to provide an educational opportunity for each individual student to develop to the best of his ability for employment in a specific field of work. It shall also develop competence and understandings in democratic citizenship, family life, and health and physical fitness for all students. This program shall be available to those youth who are interested and can profit from it.

This is a three year high school program which includes the mandated subjects, elected field of specialization, and related trade or technical subjects. Graduates complete at least 18 units of credit, including regular English and Citizenship education offerings. The major laboratory experience involves four periods (three full clock hours) per day which totals 1800 hours in the three year sequence. This work is taught by competent and certified instructors. Equipment is comparable to that used in industry, and the standards of achievement meet requirements set by industry for beginning employment.

ATTENDANCE POLICY

According to the State Education Law it is compulsory that pupils attend classes as scheduled in the school calendar until the age of 16.

Attendance is governed by the following procedure:

a. Student report to home room.

b. Home room teacher reports absences to the office.

c. Office issues absence reports to every teacher.

d. Tardy students are to obtain admission slips from the office.

e. Tardinesses are to be made up in detention room

f. Students who return from sickness are required to be readmitted by the nurse.

Legal excuses are:

a. Sickness
b. Sickness in the family
c. Death in the family
d. Inclement weather
e. Court appearance

Note: In order to legally excused, a note from the parent is required.

ANNUAL RECORD OF ABSENCE

NAME____________________________________ CLASS_______________

YEAR 196 -196

ABSENT HALF DAY / ABSENT FULL DAY X TARDY T

MONTH	1st Week					2nd Week					3rd Week					4th Week					5th Week					TOTAL
	M	T	W	T	F	M	T	W	T	F	M	T	W	T	F	M	T	W	T	F	M	T	W	T	F	
SEPTEMBER																										
OCTOBER																										
NOVEMBER																										
DECEMBER																										
JANUARY																										
FEBRUARY																										
MARCH																										
APRIL																										
MAY																										
JUNE																										

REMARKS:

YEAR'S TOTAL

POLICY ON DISCIPLINE

Our school is filled with ladies and gentlemen in their "teens" who are here to get the best education they can in the short time available to them. Each student is expected to act like this at all times, taking responsibility for his or her actions, exercising good judgment in clothing worn and language used, and developing good habits of attendance, punctuality, and a healthy respect for the rights and privileges of others.

Teachers are primarily responsible for the discipline in their own classroom. They should strive to develop self discipline through the use of goals and aims which students will try, constantly, to achieve. There are three types of discipline used, namely: absolute authority, appeal to personal interests, and control through group responsibility. Some types are better than others. The latter is the most important and should characterize the school discipline.

Emphasis should be placed on preventive measures which aim at producing a self-governing individual through expression rather than repression. This is effectively accomplished by:

a. Motivation of lessons.

b. Interest and enthusiasm on the part of the teacher.

c. High standards of achievement.

d. Extra-curricular activities.

e. Teacher-student rapport.

BEHAVIOR REPORT

Student:______________________________________ Date:_________

Home room:_____________ Class:___________ Period:_____________

The above student has been sent to the office for the following reason: ____

____

____

____

Time:__________ ________________________________
Teacher

Arrived at office_____________ Sent to________________________

1 copy by student to office
1 copy by teacher after school to office

A Policy on Marking

The evaluation of the efforts of every student is an important part of his education. Therefore the purpose of our marking system is:

1. To appraise the student's progress.
2. To judge his achievement in terms of employment requirements.
3. To compare the achievements of each student with those of other students.
4. To provdie a reward for sincere effort.
5. To provide a record of the achievement of each student.

Teachers are to employ numerical marks when evaluating any students' work.

The passing mark for all grade levels will be 65. If a student is absent 10 times or more for reasons other than legal absences, he becomes an automatic failure, for that marking period.

There will be a marking period every 6 weeks during the school year, making a total of 6 marking periods.

Marks for each marking period will be compiled so as to allow no more than 60% for shop work, 30% for written work and 10% for tests.

The final mark for the course at the end of the year will include the average of all 6 marking periods. This will be called the student's class average and will be weighted as 75% of the final mark.

A final examination consisting of a practical and a written part will be given in each shop course. The practical part of this examination will be worth no more than 66% of the final examination mark. The written part of this examination will be worth no more than 33% of the final examination mark. The total final examination mark will become 25% of the final mark.

The class average (75%) and the final examination (25%) will make up the final mark.

Incompletes must be made up before the end of the first two weeks following the regular marking period. No incompletes will be used on the last marking period. If incompletes are not made up on time a student will have to take a 60 for the marking period. Final incomplete make-up marks shall be submitted to the guidance office not later than two days after the make-up deadline.

Teachers will turn in their marks at the end of each marking period. Final marks are to be in before the end of the final week before graduation day.

Related and classroom subjects will be marked on the basis of 1/3 for class work, 1/3 for written work, and 1/3 for tests, and will be applied to each marking period. The final examination will be 1/7 of the years average. The final mark for the course will be the average of the 6 marking periods and the final examination.

Interim Progress Report

Central High School
Center, N. Y.

______________196___

Re:______________________________ __________ ________________
Name Class Home Room

Dear Parents:

______________________________'s work in ________________________

in recent weeks has

0 been outstanding
0 shown considerable improvement
0 shown some improvement
0 not been up to the standard expected of him
0 ____

Progress has been noted in the quality of the student's

0 preparation of daily assignments
0 independent work on long-term assignments, research papers or projects.
0 participation in class
0 performance on laboratory assignments.
0 performance on tests designed to check student progress.
0 ____

The student's work is lacking in the following respects:

0 Homework is frequently missing.
0 Homework is frequently submitted late.
0 The quality of daily home preparation is poor.
0 Long-range assignments are poorly planned.
0 Participation in class is limited.
0 Laboratory assignments are done poorly.
0 Performance on tests is inadequate.
0 Work missed because of absence has not been completed.
0 Skills essential for progress in the subject are lacking.
0 Help is not sought when needed.
0 The student comes to class frequently without necessary books or materials.
0 ____

Comments and/or Suggested Actions:

Parents are invited to comment on the other side of this report. Please call the teacher or counselor at EL5-1810 or UN1-8591 if the nature of this and/or other reports warrants a personal interview.

Sincerely ____________________
Instructor

____
Department Chairman

POLICY ON EXTRA CURRICULAR ACTIVITIES

The Director of Vocational Education is responsible for setting the policy with respect to pupil out-of-class activities: who may participate and to what extent, and faculty assignments. The vocational school policy must be coordinated with the system-wide policy. Financing activities must be controlled by the proper administrative authority. The approved activities should provide experience for the pupils not otherwise available in the classroom.

ATHLETICS

The details of operation of the vocational school's athletic program will be delegated to the Director of Physical Education for the vocational school; however, the Vocational Director must administer and supervise the program and make decisions in respect to the control of athletic activities.

1. Interscholastic Sports. Some of the points the Director of Vocational Education must keep in mind when making the policy for interscholastic sports are:

    A. What sports are to be included in the program.

    B. Scheduling of games

    C. League participation

    D. Pupil control at games

    E. Faculty assignments

        1. Ticket sales
        2. Ticket collection
        3. Proctors
        4. Bus supervision

    F. Eligibility for pupil participation

    G. Financing

        1. Tickets
        2. Equipment
        3. Securing game officials
        4. Coaching assignments
        5. Transportation
        6. Insurance
        7. Medical supervision

    H. Awards

        1. Participation requirements for awards
        2. How and when awarded

2. Intramural Athletics. Some of the points a Director should keep in mind in establishing a policy for intramural sports activities are:

A. Scheduling

1. So that a maximum number of pupils can take part.
2. So that intramurals do not interfere with the Interscholastic program.
3. So that intramurals do not require released time from regular classes.

B. Awards - to whom and when awarded

C. Adequate insurance coverage.

3. Athletic policy. Interscholastic athletic activity will include the major sports such as: football, soccer, and cross-country in the fall; basketball, hockey, skiing, and swimming in the winter; and baseball, track, golf and tennis in the spring.

The athletic director is responsible for:

A. Scheduling competition with other schools in the approved league for all interscholastic athletics.

B. Securing officials for all home events.

C. Coordinating equipment purchases.

D. Coordinating transportation arrangements with the Superintendent's office.

E. Preparation of budget for all sports.

F. Making out accident reports for athletic injuries and arranging for medical supervision at all scheduled games.

The Principal will make faculty assignments in the area of:

A. Sale of Tickets

B. Bus supervision

C. Chaperones at games

D. Setting up and enforcing eligibility regulations modeled after the league standards.

4. Intramural Policy. Intramural sports activity will be provided in all areas where time, equipment and supervision permit. The athletic director will be responsible for scheduling and promoting participation in all intramural sports. All competition will be scheduled in free time during the last period of the day.

STUDENT GOVERNMENT

The administrator usually delegates responsibility for supervision of this program to faculty members. He must formulate policy, approve programs and activities, maintain financial control, and evaluate results.

1. A faculty member shall be assigned as advisor to the Student Council.

2. The objectives of the Student Council shall be in accordance with established By-Laws.

3. The officers of the Student Council shall be elected each year by the student body. They shall consist of president, vice-president, secretary and treasurer.

4. The faculty advisor will be responsible for finances and bookkeeping.

NEWSPAPER

A member of the English Department shall be assigned as advisor to the editorial staff of the school newspaper. The faculty advisor is responsible for:

1. Selecting members of the editorial staff.

2. Distribution of the newspaper.

3. Determining the price of the newspaper.

4. Determining the length of time each student shall serve on the editorial staff.

5. Securing advertising to supply some of the funds.

ASSEMBLY PROGRAMS

All assembly programs shall be educational in nature. The administrator shall approve all assembly programs and determine whether or not they will contribute to the overall education of the student body. All teachers shall accompany their classes and remain with them during assembly. These programs will be held not oftener than once a month, during the middle of the week, alternating afternoon and morning periods.

A PHILOSOPHY FOR GUIDANCE

"The basic elements of a guidance program are the types of services which it provides. These are services to pupils in groups, services to pupils as individuals, services to the instructional staff, services to the administration, and research activities. Viewed in this light, the guidance program has heavy responsibility. The responsibilities are not primarily for the operation of the guidance program as a unique and separate part of the school's program. The task of the guidance program is to facilitate the adjustment of the school to the pupil and the adjustment of the pupil to the school and to life."[1]

Guidance Organization.

Some of the basic principles for the Vocational Director when establishing the policy for the guidance program are:

1. The guidance program should aid the school in meeting its objectives.
2. It should serve the interests, needs and purposes of the students.
3. It should be a continuous program and serve all youth in the school.
4. It should be organized to deal, not only with problems after they arise, but also with their causes so that they can be prevented from reoccurring or better solutions may be achieved.
5. It should provide for all phases of pupil interest, problems, and study.
6. It must be an integral part of the total school program and be related to home, community, and other out-of-school experiences of pupils. It should enlist the interests and efforts of every member of the school staff.
7. It should be as simple as possible.

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[1] Froehlich, Clifford P., Guidance Services in Smaller Schools, New York: McGraw-Hill Book Co., Inc., 1950. p. 21.

Policy for Pupil Personnel Services.

The Director of Guidance for the Vocational School is directly responsible to the principal of the Vocational School for the efficient operation of the Pupil Personnel Service Department. The Director of Guidance and his two assistants have the necessary authority to enforce decisions on discipline for minor infractions of school rules and regulations. However, their major role is that of providing service to the school, students, and parents in the following areas:

1. Service to Students.

   a. Assist students in their selection of courses in the right sequence.

   b. Check and record progress and achievement.

   c. Aid in finding a solution to the personal problems of the student.

   d. Provide information on further education for the student.

   e. Provide a guidance service in job placement.

2. Service to the School.

   a. Aid in developing a sound parental attitude toward the school and a better parent-child relationship.

   b. Inform the P.T.A. of guidance services available in the school system to the student, to the parents and to the teachers.

The effectiveness of any pupil personnel service is determined by the extent to which it is understood by parents, teachers, students, administration and guidance personnel.

MEMO TO: Director of Guidance Department

From: Director, Vocational Department

Subject: Course Description in Programming (Machine shop)

Date: July 6, 1963

Our latest piece of machine shop equipment has been installed and checked out. I'm referring to the "Position Master", the numerical tape control machine, complete with:

1. Transistorized measuring machine which operates electro-mechanically to punch tape.
2. Vertical milling machine, completely fitted with a digital transducer assembly and
3. Fully transistorized control console, with digital converter, tape reader and motor controls.

This means that we now have visible evidence of "automation" within our own building and have the opportunity to train students on the technical level. We have been told that there are only 1000 N/C machines in our country, and that in the next ten years conventional machining processes will in many instances be replaced by numerically controlled operations.

Standards to be met:

One important aspect of N/C is that a large portion of Job planning is done at a desk. The person who performs these operations is a "process planner". He should know about new materials, the kind of tools used to cut or drill specific material, as well as cutting speeds and feeds. He must know mechanical drawing and blueprint reading in order to program information to a tape which is fed into the machine to direct its operation. This will require at least a partial revision in the training for the crafts. For example, there is now a definite overlapping of both the electrical and mechanical fields in these new types of machines. The machinist, toolmaker, and machine operator will have to have a basic or rudimentary knowledge of electrical operations. In addition, both the electrical and machinist personnel will have to have a practical knowledge of modern mathematical concept. This means that students enrolling in this course must have the capacity to read at age level, be able to master algebra and trigonometry and understand the elements of physics.

Aim of Course:

1. To prepare students for employment as electrical and mechanical technicians, as process planners, numerical control operators, to work at phases of design and production as draftsmen, assistant designers of computers.
2. To prepare students for further study on technical institute level.

Who should take this course:

1. Students with ability in math, science and mechanical aptitude, who will seek employment in engineering departments of manufacturing plants.
2. Students who are interested in mechanical engineering and plan to go to a technical institute or engineering college.

How to be Programmed:

10th Year	English 10th year Citizenship Ed. 10 Technical Math 10th year Technical Science 1 (Physics) Machine shop 1 Mechanical Drafting 10 Physical Education
11th year	English 11th year Technical Math 11th year Electrical Drawing 11 Electric Theory 11 Electric Laboratory 11 Physical Education
12th year	English 12th year Citizenship Ed. 12 Technical Math 12th year Electronics Programming Machine Shop - Physical Education

Currently Used - Seneca Vocational High School, Buffalo

Four Year Curricula - Programming - Electrical and Machine Shop

	9th year	10th year	11th year	12th year
Shop	Exploratory 10 per. per week	Pre-Specialization 18 periods per week	Specialization 18 periods per week	Specialization 18 per. per week
Trade Math	Algebra 5 per. per week	Related to Trade 5 per. per week	Related to Trade 5 per. per week	-----
Trade Science	Trade Science 5 per. per week			Related to Trade 5 per.per week
Trade Drawing	Blueprint Reading 4 per. per week	Related to Trade 5 per. per week		
S. S.	Economic World 5 per. per week	World History 5 per. per week	American History 5 per. per week	American Hist. 5 per. per week
English	5 per. per week	5 per. per week	5 per. per week	5 per. per week
Electives for Honor Students	Algebra 5 per. per week	Plane Geometry 5 per. per week	Inter. Algebra Chemistry 5 per. per week	Trig. - Solid Geom.-Physics 5 per.per week
Physical Ed.	Physical Ed.	Physical Ed. 2 per. per week	Physical Ed. 2 per. per week	Physical Ed. 2 per.per week

Suggested Course Content:

Mathematics

A. Cartesian or Rectangular Coordinate System

Meaning of zero point or origin

Determining x and y coordinates of points in various quadrants.

Interpretation of drawings in x and y coordinates

B. Number systems

- Decimal System of Numbers
- Binary System

C. Basic types of Binary Coding

- Straight Binary (used with contour path machines)
- Binary Coded Decimal (BCD - used for point-to-point)

D. Digital Logic

- Symbolic Logic
- Boolean Algebra
- Application of Boolean Algebra (switching Circuits)
- Logical Design of Electrical Networks
- NOR Logic

ELECTRICAL

A. Schematic and wiring diagrams

- Interpretation of numerical control symbols

B. Semi-conductors - properties

- transistor theory - N and P types
- transistor symbols
- transistor properties
- transistor current flow - NPN & PNP

C. Interpretation of pulse trains

D. Transistor circuits

- NOR Logic Circuit Applications
- NOR circuit
- Clipped NOR circuit
- AND gate
- OR gate
- Shift phase register
- Memory (clock) multivibrator
- Amplifier
- Counter (ring type)

E. Printed circuit technique

- Advantages of this type of layout
- Component layout and mounting-physical and electrical
- Component types and circuit arrangements
- Service and Testing
    - Use of tools - mechanical and electrical
    - Circuit tracing
    - Unsoldering the defective component
    - Circuit testing and inspection

- F. Introduction to feedback control
    - Quantizer disc method
    - Principles of operation
- G. Safety precautions

MECHANICAL

- A. Basic design of drill
    - Welded construction
        - Box type
        - Stress relieved
        - Modular design
        - Precision design
            - Circular ways
            - Thompson Recirculating Ball Bushings
        - Lubrication
- B. Drill Press Operations
    - Spotting
    - Drilling
    - Reaming
    - Tapping
    - Countersinking
    - Counterboring
    - Checking
- C. Speeds and Feeds
    - CS ft/m - Cutting speed in feet per minute
    - RPM - revolutions per minute
    - Feed per revolution
    - Feedload per cutting edge
- D. Lubricants and coolants
    - Soluble oil
    - Cutting oil

E. Tool Holding Devices
  - Drill chucks
    - Key type
    - Keyless
    - Taper spindle
    - Tap holder
    - Solid
    - Slip (Friction)

F. Work holding devices
  - Vise
  - Straps, Nuts, Washers
  - Vee blocks
  - Parallels
  - Accuset
  - Drill Fixtures

G. Programming
  - Sequence
  - Location of work on table
  - Job set ups
  - Machine operations
  - Machine controls (manual)
  - Numerical controls (tape)

H. Safety Precautions

POLICY FOR STUDENT SELECTION

The Director of Vocational Education is responsible for pupil recruitment and selection. A policy should be formulated which guides the selection of students. Some questions the administrator should consider are:

1. Who should be admitted:
    a. All who apply?
    b. Those referred only by feeder schools?
    c. Restricted to those who meet the entrance requirements?
2. How many should be admitted?
    a. Shall the number be restricted to those who can be employed?
3. Shall the entrance requirements be related to acceptable industrial standards for employment?
4. How should entrance standards be determined?
    a. Physical capacity necessary.
    b. Mental capacity necessary.
5. Do admission requirements meet demands of local labor market in terms of:
    a. Number of people required.
    b. Kinds of training.
    c. Level of training.
6. What organization is required to supervise admissions?

Policy. Applicants are selected after an evaluation consisting of an entrance examination, personal interview and the pupil's record in junior high school. The entrance examinations are scheduled in the spring, and because of the tremendous popularity of these offerings, early applications are advised. An exploratory ninth grade program is offered for a selected number of boys. During this exploratory year, the pupil follows a regular ninth grade program, including English, citizenship, general science and elementary algebra. In addition, an exploratory shop program is required, which acquaints him with the specialized offerings in the tenth year.

Who May Apply? Any boy or girl, within the county, who will enter the 10th grade and who is is good standing with at least 4 units toward graduation may apply.

Admission Procedure. Students may obtain an application form from the local high school guidance counselor. The completed application form should be returned to the guidance counselor who will forward it to the Vocational Director along with a transcript of grades, personality and attendance records and any standardized test score and pertinent family history data.

Entrance examinations will be given the first Saturday in May in the High School cafeteria and will be held from 9 A.M. to 12 noon.

A personal interview will be scheduled for those students who achieve acceptable scores on the entrance examination. Each student will be notified of the time, date and place after results of the examination have been received by the director of Vocational Education. Applicants will be interviewed and selected by an interviewing team made up of the Director and major area shop instructors.

Elements of Selection to be Used by the Interviewing Team

1. Stability of purpose:

   Is the applicant sufficiently interested in the subject to want to earn his living in the field, or is his desire merely to seek status among his peers? Is his choice real or superficial?

2. Aptitude:

   Does the student have the capacity to learn? Information about this capacity may be had by checking school grades, getting test results from tests such as: IQ test, Abstract reasoning, and D. A. T. achievement tests. The school record will reveal the past history of attendance and punctuality which may have a direct bearing on future performance.

3. Physical health factors:

   An applicant's physical condition may have a direct bearing on the type of work into which he will eventually be placed. With certain defects a person would become a success in certain fields but would be a failure in another.

4. Educational achievement:

   The STRONG VOCATIONAL INTEREST INVENTORY, the CALIFORNIA MATH TEST (advance form BB) and the ARMY GENERAL CLASSIFICATION TEST (revised) or the IOWA TEST, are among those psychological tests which will indicate approximate ability in the field of educational achievement.

5. Economic Factors:

The economic background of the family from which an applicant comes, often effects his attitude toward hard work. A person from a high income home may not have a habit pattern of hard work, whereas one from a lower income background may have had to work hard for everything he has been able to get out of life.

6. Work experience:

A person with a background of work experience may have a better idea of what his real goals are. Therefore, he would have a stronger reason for being a good student.

7. Personality and Personal Adjustment:

Personality and adjustment in certain situations are important factors to consider when training an individual for any field. The ability to meet people and deal with them cordially, is an important asset in one field, while it would be of little consequence in another. Similarly, a facial deformity would make little difference in one position while it might be a catastrophy in another.

Student Personal Interview

Sample questions for the interviewer:

1. If you complete your education and training here, where do you expect to obtain a job?
2. What type of job do you expect to get after graduation?
3. Do you know what it takes to get a job?
4. Do you realize the competition in this field?
5. Do you know what you are getting into?
6. What are some of the opportunities in this field?
7. How did you arrive at your choice?
8. Do you personally know anyone working in this field?

POLICY ON LIVE WORK

In order to make the course of study more meaningful and to provide learning experience not otherwise available in a school setting, it is desirable to bring into the school shops and laboratories, selected "live work".

The administrator has the responsibility to coordinate and select those projects which meet the following criteria:

1. Does it provide experience related to the course of study?
2. Does it provide learning experience not otherwise provided in the school?
3. Is it within the scope of the program?
4. Do the students have sufficient background and training to cope with the whole project?
5. Does it have the instructor's approval?

The following is the procedure for having "live work" approved.

1. No work may be brought to any shop unless it has the approval of the Director in writing.
2. Obtain and fill out the Application and Repair Agreement form.
3. Final approval and appointment date to be set by the shop instructor.

Central Technical and Industrial High School

APPLICATION AND REPAIR AGREEMENT

Name of Owner________________________ Phone No.________

Address________________________ Date__________

Make of project__________________for______________Shop

Year__________Model______________________

Description of Repairs Necessary	Estmiated Cost

Approved by: Approved by:

______________________ Instructor

______________________ Principal

The shop classes at Central Technical and Ind. High School agree to make or repair as specified in this agreement the project described above. Repair work is done on an instructional basis and is taken only as it fits into the program of the shop. No schedules or other time limits will be placed on any repair job. All work is done on a non-profit basis. The owner must expect that the job will take longer than in a commercial establishment.

The owner of the above described job agrees to leave said project in the Central High School shop at his own risk. He further agrees to accept all responsibility in case of loss by fire, theft or damage other than that incurred in the normal operation of the school.

Payment of Bills

The owner agrees to deposit with the instructor an amount equal to the estimated cost of repairs on the entry of the project into the shop. It is understood that if the cost of repairs is less than the estimate, the difference will be refunded. If the cost is greater than the estimate, the owner agrees to pay the difference before removing the project from the shop.

Signed______________________ Owner

Signed______________________ Instructor

POLICY ON FIELD TRIPS

It is school policy that properly planned field trips to selected industrial plants and public shows or displays of materials and equipment is a desirable practise and can supplement good teaching.

Each teacher should plan not more than four (4) field trips a year.

The following procedure is to be used when requesting approval for a field trip.

1. Fill out request form two (2) weeks in advance.

    a. Check field trip calendar for conflicts.
    b. Coordinate trip with other departments.

2. As soon as request form is returned with approval, send parental approval forms home with class members.

3. Report to the office the number of students with parental approval. Note how many will have to be assigned special classes because they will not be going with the group.

4. All absences will be reported to the office prior to departure.

5. Names of all instructors going on the field trip as supervisors will be reported to the office so their classes can be re-scheduled if necessary.

6. Where ever possible, parents should be invited to go along to act as chaperones. This is particularly important if mixed groups go on a trip.

FIELD TRIP APPROVAL CARD

Instructor________________________ Shop or class____________

Place to be visited______________________________________

Purpose____

Date______________________ Departure time_________________

Approximate return time___________________________________

Means of transportation______________________Cost__________

Attached: Transportation request
(Other)

Signature of instructor____________________

Approval:_________________________________
Director or Principal

- -

PARENTAL APPROVAL CARD FOR FIELD TRIP

The ____________________Class of which your son or daughter is a member has scheduled a field trip to____________________ ______________________________on__________________________.
(date)

The group will leave at _______m. and return at approximately __________m. Transportation is by_____________________________. The trip is under the direction of___________________________. Adequate supervision will be provided.

May we have your approval.

____
Director

I hereby give my approval for_____________________________
to go on this trip.

Signed:_______________________________

INSTRUCTIONAL MATERIALS POLICY

There are several types of Instructional Materials available to teachers. They can be produced by the teacher, student, or obtained from commercial sources. A teacher or administrator can obtain a wealth of free and inexpensive instructional materials simply by writing to various government, and commercial organizations. An excellent source is Free and Inexpensive Materials by Polk.

The Director or Principal shall formulate policy for the use, procurement, and distribution of Instructional Materials. Some basic principles to keep in mind when developing such a policy are:

1. Who shall use the materials?
2. Will students be charged for instructional materials?
3. How is instructional material to be used?
4. If they are to be teacher made, will typing and duplicating services be made available?
5. How much will be allowed in the budget for instructional materials?

POLICY

Teachers are encouraged to use instructional materials, to aid and enrich student educational experiences. Students shall be charged a reasonable amount for any materials the school has to purchase. Teachers are reminded that instructional materials are aids for teaching, not a replacement for teaching. The department head shall approve all teacher-made instructional materials before they can be reproduced by the school. Typing and duplicating services will be made available. A sum not to exceed one hundred dollars will be allowed each department in the annual budget for obtaining instructional materials.

POLICY ON DAMAGE

Damage or breakage to school property shall be reported through the Director of Vocational Education to the school Principal.

Accurate details must be included in a written report of the damages so that corrective action can be taken.

Damage reports must be filled out in detail by the teacher, checked for accuracy by the department chairman, and forwarded to the building principal. When this report reaches the principal, he will:

a. Forward a copy to the Superintendent of Schools

b. Send a copy to the building superintendent for corrective action. Upon completion of repairs, the countersigned copy will be returned to the Principal.

c. Determine what preventive measures must be taken.

DAMAGE REPORT FORM

Date__________ Room Number__________ Teacher________________

Description (accurate details): ____________________________

____

____

Action taken: ____

____

____

Situation corrected:____________________ Date:________

Signature: ________________________

Principal

POLICY FOR FINANCIAL TRANSACTIONS

1. From time to time members of the school staff may wish to contribute to fund raising campaigns sponsored by an approved civic organization. The organizations which have been approved by the Board of Education are:

   a. Community Chest
   b. Red Cross
   c.
   d.

2. Each year a member of the staff will be assigned to act in the capacity of advisor to fund raising projects sponsored by the student body. The following projects have been approved and advisors assigned:

   a. Caps and gowns . . . . Mr. Abe
   b. Year Book . . . . Mr. Bee
   c. General Organization . . . . . Miss Cee
   d. Newspaper . . . . Miss Dee

3. The student shall receive a carbon copy of the receipt; the original shall be kept on file by the advisor.

4. SAMPLE HOME ROOM RECORD:

FINANCIAL COLLECTION RECORD

Purpose______________________________

Where Collected__________________________

Teacher's name___________________________

Student Treasurer________________________

Date Started____________Date Completed________

NAME OF STUDENT	DATE	AMOUNT	SIGNATURE

ESTABLISHING BUDGETS

A local school board is responsible for securing the necessary funds for the operation of the school program and for approving the financial policies with respect to its operation.

The local Vocational Director is responsible for supplying the superintendent and the board with the necessary information from which to construct a budget. The director should:

1. Make preliminary studies of needs. The basic facts and figures are usually supplied by his staff.

2. Prepare and justify by itemized study and cost estimates.

3. Keep accurate cost records as a basis of budgetary planning.

4. Consolidate and summarize all budget items.

The budget should be considered as one part of a long range plan in developing and improving the program. For example, it should provide for systematic replacement of worn out and obsolete equipment. It should also provide for keeping the program in step with technological changes. It should be flexible for changing enrollment.

Operations within the Budget:

1. It is the director's responsibility to recommend, modify and approve requests for expenditures in terms of the approved budget.

2. The director should keep a running account of expenditures so as to know how the department is making out in terms of the budget.

3. The director should operate an internal budget within his own department so that funds will be fairly and equitably distributed.

4. The director should establish or cause to be established, an effective accounting and bookkeeping system.

5. Provision should be made for meeting emergencies.

6. A procedure must be set up and used effectively in handling funds from sale of products, supplies, etc.

Appraisal:

It is important to study the working life of any piece of equipment to effect true economy. Keep good records on each piece of equipment, including:

1. The length of time it remains in servicable condition.

2. The cost of maintenance.

3. The extent and kinds of repairs that have to be made.

4. The kinds and extent of operational failures.

5. The wearing qualities of the finish.

6. The wearing qualities of the component parts.

7. How satisfactory it has been in use.

Keep a permanent inventory which will provide the information needed for a life study of all equipment. Money may then be budgeted over a period of time to repair or replace the equipment.

ESTABLISHING FINANCIAL CONTROLS OVER SCHOOL EXPENDITURES, INCOME AND OTHER FINANCIAL ACTIVITIES

Every administrator has the responsibility of setting up and utilizing sound financial policies and practices. These should include the following:

1. All money received should be recorded. Receipts should be issued for every cent taken in.
2. All money received should be deposited promptly.
3. Formal records should be kept and filed by years for reference.
4. Expenditures should be formally recorded and signed by the authorized persons (preferably more than one) including the administrative head as one of the signers.
5. All records should be carefully stored and protected at all times.
6. Records should be in an acceptable form, easily read, and checked by auditors.

Money may be handled in many school activities and functions. Some of these are:

1. Cafeteria money.
2. Sales of materials.
3. Fines and replacement of damaged or lost items.
4. Petty cash.
5. School store funds.
6. Student activity funds.
    - a. Athletics
    - b. Dramatics
    - c. Dances
    - d. Yearbooks
    - e. Music group funds
    - f. Fees, etc.

Most Boards of Education require that funds be handled by a designated individual in each school unit. He is often called the central treasurer. In smaller units the job may entrusted to a designee of the administrator. It is common practice to require that these persons be bonded.

The "treasurer" should issue, at frequent intervals, a financial statement indicating receipts and expenditures for the total operation and its individual segments. Copies should go to sponsors, organization treasurers, principals, and other persons who may desire the information are entitled to it.

In all instances staff members should be in charge and held strictly responsible for the correct and proper procedures. In those instances where they are involved in handling funds, students must be supervised closely, and taught correct methods and systems of accounting. There are few opportunities for teaching involved in most financial activities of a school program.

SPECIFICATIONS

One (1) 12" Wood Turning Lathe

Swing over Bed	12"
Swing over Bed Gap 16½" diameter x 4½ thick	
Distance between Centers	39"
Length of Bed (overall)	67"
Variable Speed Drive 630 RPM to 3450 RPM	
Spindle Diameter	1 11/16"
Spindle Length (overall)	17½"
Distance between Spindle Bearing Centers	12½"
Spindle Thread	1 1/8"-8"
Total Length	69"
Total Width	16½"
Overall Heighth	453/4"
Center line of Spindle to Floor	42"
Approximate Shipping Weight	575 lb.

Model #53 W 302 to include the following:

one (1) #90 W 145, motor, 208 volts, 3 phase, 60 cycles

One (1) #90 W 866 Magnetic Starter

Accessories

Four (4) 4" Face plates #TR 526

One (1) Tail Center-ball bearing, #53W810

One (1) Spur center, 1" dia. #1786PP

One (1) Cup center, 3/4" diameter #1787PP

To be delivered to Wood Working Shop, Lawrence High School, Cedarhurst, N. Y., during August 1963.

Model - J. Line Broadhead barrel or equal accepted.

LOCAL ADMINISTRATIVE REPORTS

There are many varied reports required of the Vocational Director. He must keep track of work on the local level and pass this on to his superiors. Among local reports to be made are:

1. Periodic budget report
2. Reports on course of study
3. Report on teacher observations
    a. Teacher improvement
    b. Teacher morale
4. Periodic attendance
5. Class size
6. Survey of graduates
    a. Job placement report
    b. College placement report
7. Student health, safety and welfare
    a. Discipline
8. Student anecdotal report
9. Student progress report to parents
10. Teacher anecdotal reports
11. Supervisory reports
12. Reports on administration of school plant
13. Regents and transcript reports to college and other schools.
14. Statistical report when required

STATE ADMINISTRATIVE REPORTS

Many periodic reports are required of the Vocational Director which must be submitted to the State. Among these are:

1. Statistical report concerning teachers.
2. Fiscal report on Federal funds used.
3. Fiscal report on State funds used.
4. Statistical report on Vocational classes.
5. Descriptive report on developments of the program of Vocational Education.
6. Special reports when requested.
7. Fiscal report on the use of local funds.

HOW TO SELECT YOUR STAFF

Among the main functions of a Vocational Director and/or school principal should be (1) to provide educational leadership and (2) selection of qualified personnel for his staff. The following outline covers suggested areas an administrator can follow in selecting staff.

1. Obtain letters of application. Observe the following:

    a. Style of writing. Is it clear, concise?
    b. Does the applicant present his background in a logical sequence?
    c. Neatness, orderliness.

2. Application Blank. Consider:

    a. Nature and extent of education, work experience
    b. Did the person fill out the blank with care? (It may reflect upon the individual.)
    c. Transcripts
    d. Comments and recommendations

3. Personal letters of recommendation. Evaluate what has been said and what has not been described about the candidate.

4. The Personal Interview

    a. The administrator should put the applicant at ease, rise and shake hands, perhaps offer a cigarette. Begin to "draw him out" by talking about his background, hobbies or a mutual experience. What are his interests; let the applicant talk!

    b. Lead into a conversation about his work. Some items to bring up may be:

        (1) Types of classes he has taught
        (2) Attitudes toward discipline
        (3) Why he likes teaching
        (4) Attitudes toward grading
        (5) Attitudes toward achievement
        (6) What is his philosophy of education
        (7) Professional background
        (8) What was the relationship with his past superiors.

    c. For new teachers with no experience, ask specific questions as to what they would do in a hypothetical situation.

5. Appraisal of the candidate. Look for, listen for:

    a. Quality of voice - manner in which it is used.
    b. Speech - pattern - choice of words - organization of ideas - region of idiosyncracies.
    c. Facial expressions - deadpan - animated.
    d. Manner. The way he sits - use of hands - the way he walks and stands - alertness.
    e. Appearance - grooming - style of dress, is it appropriate?
    f. Quickness of response to questions. Is it honest, coherent?

6. The administrator should be fair and use the same evaluation standards for all candidates. The form which follows is suggested. It may be altered to meet local situations as the need arises.

7. The applicant should be informed in writing whether or not he has been accepted for the position.

PERSONAL INTERVIEW FORM

Name____________________

Candidate for____________

____

ITEMS	DEGREE			
	POOR	FAIR	GOOD	EXCELLENT
Voice				
Facial Expressions				
Mannerism				
Appearance				
Response				
Coherence				
Alertness				
Integrity				
Confidence				

COMMENTS: (outstanding or weak points)

SUMMARY:

Interviewer____________________

July 15, 1963

Mr. James C. Pluff
10 Hoodwink Drive
Rochester, N. H.

Dear Mr. Pluff:

The teaching position for which you applied has been filled. However, I am taking the liberty of placing your application on file in case we have other openings for which you might be qualified.

It was a pleasure meeting you and discussing your attitudes, experience and training.

Sincerely yours,

ohn John J. Jay
Principal

P/J

SECTION V

IMPROVING THE PROGRAM

Role of Superintendent of Schools.

The superintendent of schools is the leader and director of all the formal educational activities of a community, and he is responsible directly to the Board of Education. His task is ultimately to improve instruction by teachers and, thereby, learning and growth of pupils, but the demands of the office are such that he frequently becomes so immersed in the problems of organization, administration, and public relations that his concern with education itself is, or at least seems to be, occasional and remote. This tendency is unfortunate. Nowhere is far-reaching vision and educational statesmanship needed more than in the direction of the educational process itself.

The superintendent in every community should accept as his first responsibility the development of an educational program soundly based on a sensible philosophy and sufficiently comprehensive to provide educational opportunities for every child. He should develop this program cooperatively with the principals and through them with all the teachers, primarily because the development of an effective educational program is so large a task as to require the collective use of all professional resources available; and secondarily because in that way alone can the loyalty of the teaching staff to the program and, therefore, the success of the program be assured. The superintendent becomes effective in proportion as he secures cooperation and loyalty to the program on the part of the teaching staff.

The most important assistant that the superintendent has for improving education in a school is the principal. He knows the local community, the teachers, the pupils, and who is constantly on the job. The superintendent should work cooperatively with school principals in effecting educational improvement, stimulating, encouraging, and guiding rather than ordering and criticizing. His relationship with his principals and with the teachers should be based upon democratic principles, upon mutual respect, trust and recognition of each other's responsibility.

The superintendent's attitude should be that of a partner who is obligated to contribute toward the success of the enterprise, rather than that of the impersonal, objective critic. The best basis for judging results will be by keeping in continuous contact with the school, by holding frequent conferences with the principal, by attending teacher's meetings, by observing classes, by talking with teachers and encouraging them to tell of their work and their plans but not to make critical complaints.[x]

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[x] Briggs, Thomas H. & Justman J., Improving Instruction through Supervision, The MacMillan Company, New York: 1952. Chapter V.

IMPROVING THE PROGRAM OF VOCATIONAL EDUCATION

State and federal legislation require a vocational school to appoint an Advisory Committee.

1. Role of Advisory Committee

   a) Why Advisory Committees are needed.

   In order to create a real public school, there must be a two-way system of communication between the community and the school. Advisory committees perform this significant function, because they consist of trained specialists and leading laymen who speak for the community and carry to the people the message of the public schools.

   A two-way system of understanding and communication between the school and the community is particularly essential to Vocational Education. Only through close cooperation with the community can vocational educators hope to develop and conduct a practical and realistic program of education which will fit our youth for useful and productive lives.

   b) How Advisory Committees are appointed.

   Members of these committees are nominated by the director of vocational education and superintendent of schools and appointed by the Board of Education usually for a term of three years. Members of the faculty or residents of the school district board may suggest prospective members to the administration. According to the Smith Hughes Act, the member of an Advisory Committee must be employed in the same occupation served the Advisory Committee of which they are members.

√

When a member has been elected, a formal invitation to membership on the Advisory Committee will always come from the Board of Education. This is necessary from two points of view. First, it removes reservations the Board might have that the Advisory Committee would usurp its rights and responsibilities. Secondly, committee members will have a healthier concept in their proper place in the school organization when they are appointed by the highest authority. They realize that they are responsible to the Board of Education and that they have no authority except as their recommendationsclear through the Board of Education.

c) How Advisory Committees operate.

The Chairman of the Advisory Committee may be a lay person elected by the members of the committee from their ranks. The representative of the school is considered an ex-officio member who seeks advice, not to give it. The number of committee members is usually from 5-7, while the term of membership is staggered 1-2-3 years.

The number of meetings depend on the problem which the committee has under consideration. Usually they are held twice a year or as many times as necessary.

d) What Advisory Committees do:

The meetings are conducted by the lay members of the committee. Their purposes and functions are:

1. Determine community needs
2. Evaluate the vocational program
3. Help prepare courses of study
4. Help select and place students

5. Guide and support the teacher.

6. Coordinate cooperative training programs.

7. Promote adult classes.

8. Help to provide continuity.

9. Correlate the work of the school with that of other agencies.

10. Financial and legislative support

11. Public relations

12. Maintain local autonomy

13. Alert the school to community needs to a full and accurate picture of occupational life.

The committee members on occasion may appear before the Board of Education to personally advocate proposals in which the committee is interested in promoting. These members have often been able to provide the Board of Education with specialized knowledge and experience which is of assistance in aiding the Board of Education to arrive at a decision.[1]

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[1] Vocational Advisory Committee

Committee on Research and Publications
American Vocational Association, Inc., Washington, D. C. 1960

POLICY FOR ADVISORY COMMITTEES

Some school authorities fear that an advisory committee may exceed its specific duties and assume administrative and legislative powers. There is no real reason why the committee should go beyond its proper function if it is handled judiciously from the beginning. If a formal letter of invitation comes to the members from the highest authority in the school system and contains a statement explaining the proper relationship of the committee to the school administration and the Board of Education, there should be no initial confusion or misrepresentation of powers. If the agenda for the first committee meeting provides time for a clear statement that the new committee exists only to advise and that the Board of Education and the school staff retain full control over the vocational program, there can be no misunderstanding. Every new member must be clarified on this point, of course, after the committee has begun.[1]

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[1] ________, Vocational Advisory Committees, Washington: American Vocational Association, 1963. p. 20.

THE BOARD OF EDUCATION AND THE VOCATIONAL EDUCATION PROGRAM

REPORTS TO THE BOARD OF EDUCATION

The superintendent is the top executive in a school system and as such is the direct connection between all staff members and the Board of Education. However, when a system is of sufficient size to have administrative heads in the specialized areas, he may request these persons to prepare reports in their field for presentation to the Board of Education and, in some instances, present them orally. Vocational educators have a responsibility to make reports of their activities and needs to the local board at every opportunity. The board, as the policy-making body, should be kept informed of Vocational Education progress, changes and needs. This is usually done in written form and duplicated so that each board member will have his own personal copy. If the report is presented orally, the individual copies should still be prepared and distributed. In seeking approval or conformation of vocational education proposals or general support, the superintendent needs the advice and counsel of the department head or principal and will usually request a report.

It is good policy to prepare an annual report on the vocational segment of the system for the superintendent. There should be sufficient copies for each member of the board. This information keeps the board members informed and in a position to understand better the aims and methods of the Vocational Education department. The format of these reports should be similar to those illustrated in Section III of this handbook.

SUPPORT FROM COMMUNITY AND BOARD OF EDUCATION

As the educational policy-making body in the community, the Board of Education should make certain that it understands both the objectives of Vocational Education and the conditions under which they can best be achieved. Only as members know and appreciate the unique contributions and the distinctive requirements of Vocational Education will they be able to act wisely in helping build an effective program for their community.

The program should be supported financially by the Board of Education to the degree that research has indicated.

Community support must be engendered through the activities and policies of the local Board of Education, its representatives among the vocational educators and the advisory board. In developing their public relations and contacts, they must work closely with newspapers, radio and television stations, company organizations, service clubs and social agencies.

AGENDA
for
VOCATIONAL ADVISORY COMMITTEE

DATE:

TIME:

PLACE:

1. Call to Order by Chairman 8 P.M.
2. Minutes of Previous Meeting
3. Introduction of Problem

   Establishment of a Special Welding Program of Exotic Metals for Journeymen and Master Plumbers
   -Introduced by Union Representative

4. Discussion Topics
   - a. Facilities and Equipment and Supplies available -Director of Vocational Education
   - b. Materials and Supplies Needed -Board Member "A"
   - c. Procurement of Instructor -Board Member "B"
   - d. Finances -Director of Vocational Education
   - e. Number of Trainees -Director of Vocational Education
   - f. Union Cooperation -Union Representative
5. Action to be Taken
6. Action to be taken for the next meeting
   - a. Equipment -Union Representative
   - b. Materials and Supplies -Board Member "A"
   - c. Instructor -Board Member "B"
   - d. Finances -Board Member "D"
   - e. Union Cooperation -Union Representative
7. What information should be released to the newspapers?
8. Is it necessary to meet again on this problem? If so, when?

Sample letter of invitation to Advisory Committee

September 15, 1963

Mr. James Minnegan
29 Atlantic Ave.
Lawrence, New York

Dear Mr. Minnegan:

I wish to extend to you a special invitation to be our guest at the meeting of the Advisory Committee on Vocational and Technical Education to be held at Lawrence High School on Thursday evening, September 29, at 8 o'clock.

The function of the Advisory Committee is to bring community opinion, information, thinking and planning into the school to improve the education of our young people.

We very much appreciate the service which citizens of the community have given to the educational program, and we hope you will find it possible to accept this invitation.

Sincerely yours,

Herbert E. Swords
Director of Vocational Education

Sample letter of appointment to new members of the Advisory Committee.

September 15, 1963

Mr. John Jones
386 Pearsall Ave.
Cedarhurst, N. Y.

Dear Mr. Jones:

It is a pleasure to inform you that the Board of Education has appointed you to membership on the Advisory Committee for Vocational and Technical Education for a term of two years, beginning this September.

The function of the Advisory Board is to bring community opinion, information, thinking and planning into our schools for better education of the young people of the district.

On behalf of my colleagues, I wish to welcome you and to tell you we appreciate the interest you have already shown in our school district and in the vocational and technical division in particular.

The first general meeting of the Advisory Committee will be held in the faculty room on Thursday evening, September 29, at 8 o'clock.

I hope we may have the pleasure of greeting at that time.

Sincerely yours,

Herbert E. Swords
Director of Vocational Education

AGENDA

Vocational Department Staff Meeting

Time:________________Date:____________Place:____________________

1. Problem: Dissatisfaction of employers about graduate performance on the job.

2. Reported information:
   a. Employers' reports indicate dissatisfaction with many graduates of the automobile program (weakness in math, too sloppy, poor attitude.)

   b. Graduates who have returned indicate dissatisfaction with training as it is now offered. (Machinery not up to date)

   c. Guidance and placement reports that over a period of the last two years, they have had difficulty placing graduates of the program. (same as "a")

   d. From follow-up studies students have reported deficiencies in certain areas of training. (Same as "a" and "b")

3. Discussion of problem:

   a. Why does the employer have this attitude toward our graduates?

   b. What are the probable causes of employer attitudes?

   c. What can be done to improve the situation?

4. Summary:

   A summary of the discussion of topics listed in 3abc above.

5. Action:

   a. Assign teachers to committees

   b. Assign a coordinator

   c. Set time limit for preliminary report. (Set a date and then let committee override, and set their own date.)

Note: Director should have a note-sheet prepared for his own use before going to this meeting. It should contain such items as:

1. Leading questions to bring out importance of problem

2. List of key discussion points

3. Preliminary committee assignments

4. Suggested initial reporting date

5. List of resources.

6. Suggested outline of procedure to follow for curriculum revision project.

7. Information concerning typing and duplicating facilities.

8. This project should be correlated with any other project which is in process to prevent duplication of effort.

IMPROVING INSTRUCTION

MEMORANDUM

To: Mr. Paul Grimes

From: W. A. Izzo

Date: July 15, 1963

Subject: Observation report of your 4th period class in Related Math 10.

1. In observing your class I noticed several disturbances. Several students were throwing objects across the room. A few were engaged in "horse play". It appeared a portion of the class did not relate ratio to daily living.

2. May I suggest some techniques that have worked out successfully for other teachers. Use a lesson plan which includes some applications of ratio; for example, when explaining ratio to the girls, relate the problem to a recipe for making a cake half the size, or any other ratio. The boys may understand more easily if ratio were applied to drafting or model airplanes where dimensions are scaled down.

3. If you have any questions, please see me.

Teacher's signature______________________

Please return this at your convenience.

PLAN OF CONFERENCE WITH TEACHERS

1. Purpose of the supervisory plan - is not to inspect or rate teachers; rather to analyze a learning situation and diagnose pupil difficulties.
2. Observation in class: (according my note there is evidence of:) Refer to memo notes
3. Let teacher explain.
4. What to do about situation:
    - a. Preparation: "May I see your plan book?"
    - b. Blackboard technique: "Do the pupils take advantage when not observed?"
    - c. "What were some of the ways of motivation?"
    - d. Questioning technique: why, who, when, where, how.
    - e. "What determines children's attitudes?"
    - f. Appraisal of test results.
    - g. Punishment
    - h. Humor-patience-self control
5. "Would you briefly summarize what we agreed on?"

To: Dr. John P. Jones, Superintendent of Schools

From: Alexander Hamilton

Date: July 24, 1963

Subject: Conference at the State Education Building regarding Federally financed research, demonstrations and special projects, July 23, 1963.

1. Purpose of the conference:

   a. To inform educational institutions as to how they may participate in federally financed research, demonstrations and special projects, under the provisions of the Manpower Development and Training Act of 1963 - - Title I & II.

   b. To describe the responsibility of the U. S. Department of Health Education and Welfare and the U. S. Department of Labor.

   c. To describe the function of the State Department of Labor and the Department of Education.

   d. To describe the function of the local public educational agency and the local Division of Employment.

For a description of the responsibilities of the Departments of labor and Education on the state and local levels, see enclosed booklet.

2. Groups represented at the Conference:

   a. Labor Department - research section - federal and state level.

   b. Manpower Development - on the federal, state and local level.

   c. Private licensed trade schools; private business schools.

   d. Education Department on the federal, state level.

   e. Secondary Education of large cities.

   f. Vocational and Industrial Arts Education - state and local level.

   g. Technical Institutes.

3. Dr. Strobel, Assistant Commissioner of Education, in charge of Instructional Services - Vocational Education, received about sixteen proposals forresearch, demonstration and special projects. One project originated from Syracuse, N. Y. and fifteen from New York City. He pointed out that civic agencies had prepared proposals which were designed to meet the needs of youth and adults, that were of an educational nature.

   The one from Syracuse "The Mobilization of Youth" was initiated by the Mayor. Other proposals were developed by such organizations as the Y. M. C. A., Youth Development organization and other social agencies of New York City.

   It was pointed out that public educational agencies should initiate proposals which deal with educational research, research related to vocational training, research in office occupations or surveys to identify training requirements for special groups. The research must be directly related to unemployed, out of school youth and adults, in order to meet requirements of the MDT Act.

4. Special Projects: The characteristic of a special project may involve an element of research. It may incorporate a pilot program to discover something new or unique. This may be justified if present organization or machinery does not exist. It may involve extra guidance, new materials, new training, new methods, etc.

   It may involve identification of needs for out of school youth to receive guidance for occupational training.

   Programs of Information: Could be a series of T. V. programs on "Why Youth Should Stay in School"

5. Some Programs Which Have Been Established

   a. In Pennsylvania, a "special project" was established. It resulted in adding a speech therapy class for negro girls. It included language skills in the business programs, plus 10 to 20 hours of counseling on the importance of speech for typists, telephone operators, etc. The project also recommended new techniques to be added to older programs.

   b. New York City proposed a "research demonstration project" for the disadvantaged collegegraduate. There are about 300 southern negros with degrees in education. They failed the New York City Teacher's examination. The proposal is for a series of four courses to upgrade 100 college graduates to pass the city exam. Remedial reading services and counseling services are included in the proposal.

Methods and Procedure for Improving Instruction.

Effective instruction is essential to the success of any program of trade and industrial education. A teacher may have superior knowledge about his trade or subject, but if he does not know how to plan and conduct instruction, his students do not learn, or are much retarded in their learning.

New teachers with no previous training or experience in teaching should always be provided with a short period of indoctrination and training in instructional methods and management.

The following list is indicative of the elements that enter into management:

1. Management and Facilities.
    - a. Space, equipment, and supplies.
    - b. Shop, laboratory, and classroom lay-out.
    - c. Housekeeping.
    - d. Use of equipment and supplies.
    - e. Temperature, ventilation, and light.
2. Management of Students.
    - a. Provision for individual and group instruction.
    - b. Assignment of work and equipment.
    - c. Personnel relations.
    - d. Checking results of teaching.

Instruction Improvement through Supervision. The basic result of supervision in a local program should be the improvement of the instructional effectiveness of individual teachers. A supervisor's visit in a shop or classroom should, when necessary, result in a discussion of means and methods of improving instruction and, in cooperation, in arriving at a decision on what to do about a problem and how it shall be done.

Assisting a teacher in securing needed tools, equipment, and supplies encourages him to cooperate wholeheartedly with suggestions of the superior on how best instructional results may be obtained, on the development and use of a checking device or procedure, or an unbiased evaluation of results, or on adopting remedial measures.

Improvement through Teacher Groups. Evaluation and improvement of instruction on a group basis may be accomplished through teacher's meetings and activities organized as a part of the supervising function, or through more formal teacher-training methods. Group project activities concerned with vital factors in the local program may be made more interesting and helpful to teachers.

A procedure for improvement in which a group of interested teachers may participate is suggested below:

1. Analysis of elements constituting good instruction.
2. Development of instructional evaluation forms.
3. Objective rating of instruction by teachers in their own teaching situations and in situations of others.
4. Comparisons and discussions of instructional ratings by teachers themselves, by other teachers, and by the supervisors, with conclusions on variations in ratings and suggestions on improvements of instructions.
5. Studies and reports by teachers on employment status and achievement of former students.
6. Analysis of instructional deficiencies frequently found and suggested means of correction.
7. Development of a system that will insure periodic inventory of instructional effectiveness.

Function of Supervision.

The chief function of supervision is the improvement of instruction which is essential to the success of any program of trade and industrial education. In order to fulfill this function successfully, the Director of Vocational Education will work with teachers, with superintendent of schools, with the principals of vocational and comprehensive high schools, and with people in the community who are interested in the success of the program. Much of the work of supervision, however, is in reality on-the-job teacher training given to individual teachers as the needs are recognized.

The teacher in any vocational program is the most important person in the instructional program. To develop his ability to the greatest possible degree, the teacher needs specific assistance in performing the teaching job. This assistance is part of the function of the supervisor.

The purpose of all supervision should be constructive. Helpful leadership, rather than dictation or criticism, is what teachers need. Encouragement, suggestion, and practical demonstration, with criticism serving only as a basis for constructive help, should represent the supervisor's chief efforts. Kindliness, consideration, and helpfulness are necessary to win the confidence of the teachers. Unless teachers can feel that the supervisor is a friend interested in their success, instead of a critic or fault-finder, constructive relations are not likely to be established between them. The technique of supervision itself should be a human experience. Supervision is democratic and cooperative.

It is the duty of the supervisor to surround the teacher with an atmosphere that will encourage him to think his own thoughts and express them frankly. Supervision should not be directive through dictatorial leadership, but it should lead the teacher to self-analysis, self-appraisal, and self-study of attitudes and practices so as to direct improvement from within as well as from without. Aims of supervision must be attained through encouragement, consultations, and cooperation. Unannounced visits are not resented if they are frequent and if the supervisor comes as a friendly educational physician to diagnose and help; not merely to criticize and to rate. The supervisor should come as a leader with a sense of humor and spirit of helpfulness and not as a pompous inspector.[1]

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[1] U. S. Department of Health, Education, and Welfare, Office of Education. The Operation of a Local Program of Trade and Industrial Education. Series No. 62. Washington: Government Printing Office, 1953.

JOB PLACEMENT AND FOLLOW UP

The ultimate test of a good vocational education program is the extent to which it satisfactorily meets the training needs of the youth, adults and employers in the community. The specific needs for courses and course content must be obtained from industry and from workers and kept current through continuous contacts with employers.

The local director is the person primarily responsible for determining needs and for seeing that the program is kept in line with the needs for and the needs of local workers, both youth seeking pre-employment training and older workers seeking upgrading in their present occupations.

The director of vocational education keeps track of possible job openings to which he may refer graduating students. He must set up a placement procedure. The following records will be time-savers and readily available references to determine the extent to which graduates are placed in jobs.

a. Referral Card:

Referral Card.

Name of Student: ______________________________

Name of Company: ______________________________

Person to see: ______________________________

In reference to: ______________________________

Interviewer's Signature: ______________________

Accepted: ______ Not accepted: ______

Date: ____________________

b. Employer's File.

This information will help the Vocational Director to quickly locate the prospective employers with openings into which students might fit.

Employer File

Company: ______________________________

Address: ______________________________

Person to call: ______________ Phone: ________

Student	Trade	Rate	Accepted	Not Accepted

(For a small program)

STUDENT FILE

Student: ______________________________

Address: ______________________________

____

Phone: ______________________________

Company referred to: ______________________________

____

Course taken: ______________________________

Rate: ______________________________

Comments: ______________________________

(In addition, for a large program)

o. A follow-up letter is sent to the student after he has the job to find out his reaction to his new job and his reaction to his preparation for this position.

July 31, 1963

John Doe
125 Tickett Street
Albany, New York

Dear John,

We are anxious to find out how you are doing on the new job and how well you like it. We would appreciate your completing and returning the enclosed questionnaire in the self-addressed, stamped envelope.

This will take only a little of your time but will be a great help to your school to keep our instruction up to date. We also need this information to report to the State Education Department. Your suggestions may help this year's seniors, if you return this questionnaire by the first of October. We can then use your suggestions and make the necessary improvements for their benefit.

Sincerely,

Director of Vocational Education

KEEPING PROGRAM UP TO DATE

I. Methods to Determine Change.

In order to keep a program up to date, it is necessary to evaluate it for the purpose of refinement, improvement and possibly extension.

Evaluations need not be an elaborate and costly procedure, although there may be situations in which a thorough survey is needed. Evaluation can be carried out effectively by an industrial teacher checking his own results, a supervisor checking results within his own jurisdiction, a director studying his city-wide program, or by a group process involving an advisory committee who may wish to investigate all or any part of the program.

When a change of program is considered, the follwoing questions are in order:

1. What is lacking in the program?
2. What is the program doing now?
3. What can be taken out without weakening the program?
4. What should be added that:
    a. is within economic reason?
    b. Will fit the present and future physical plant?
    c. Is within the students' scope?
    d. can utilize the present instructors?
    e. meets a need in the area for a reasonable quantity of trained workers?
    f. will fit the state plan?

Most of this information can be obtained through:

1. Advisory committee recommendations.
2. Surveys to be conducted at five year intervals or as major changes in the community occur.
3. Five-year follow-up questionnaire to out-of-school persons asking for suggestions on their weak points not provided for in the program.
4. Personal interviews

5. Individual or committee research.

6. State Department information.

II. Curriculum Improvement.

Curriculum revision and course of study development should be a continuous process in the vocational high school. The principal should take the lead in stimulating work on the preparation of better instructional materials and methods. The principal facilitates the mechanics of getting the work done. He evaluates results and consults with representatives of labor and industry as well as school personnel, in order to promote the development and improvement of courses of study. Some principals sponsor or conduct curriculum workshops for the preparations of instructional material.

III. Improvement of Staff Morale.

School staff morale is usually held in delicate balance by the principal. The following practices are often the causes of good staff morale:

1. Teacher recognition by principal to superintendent.

2. Press releases of teacher's educational improvement and personal accomplishment.

3. Special salary schedule for vocational instructors to attract and hold qualified people.

4. Social and professional monthly dinner meetings.

5. Released time for attendance at professional conferences.

6. Released time for industrial visits.

7. Allow promotion from within the ranks.

8. Praise for all is the fuel that inspires achievement.

IV. Faculty Meetings.

The faculty meeting is usually under direct supervision of the principal. He may receive assistance from the vice principal, guidance counselor, department heads, school medical staff, legal advisors, or specialists to present a planned program.

The purpose of the faculty meeting should be to:

1. Pass on information and ideas.
2. Train the staff for specific jobs.
3. Form or get reports from study groups.
4. Transfer trends of thinking from administration to staff or from staff to administration.

In the planning of faculty meetings these items should be kept in mind:

1. Call faculty meetings only when there is a specific need for one.
2. Have them well-organized, to the point, and as short as possible.
3. Never discuss material that involves only part of the staff present.
4. Be sure that those presenting material to the group are able to make an adequate presentation.
5. It should be understood that matters discussed in faculty meetings should be held in strictest confidence, unless otherwise directed.

V. Staff Training

The need for staff training should be determined by department heads, administrative personnel working under the principal, or the principal himself. All such training, regardless of source, should be cleared through the principal's office. Some of the principal's duties in this respect are to:

1. Designate the proper place for meetings.
2. Secure and approve instructional personnel and materials.
3. Designate personnel to take part
4. See that all personnel involved are properly notified of his decisions.

Staff training meetings may be conducted as follows:

1. Weekly or monthly faculty meetings of shop instructors and related subject teachers to:

    a. discuss changes in methods and techniques.
    b. hear speakers from industry bringing new technology to teachers' attention.
    c. review text books.

2. In-service Training, such as:

    a. Plant visits.
    b. Attendance at conferences and professional meetings.
    c. Extension and summer session courses at colleges or universities.
    d. Service courses given by manufacturers.

CENTRAL TECHNICAL HIGH SCHOOL
717 South Warren Street
Syracuse, New York

AGENDA

for

Curriculum Revision Committee

1. Purpose: The rate of recent developments taking place in our industrialized society has accelerated. This is reflected in the use of new time and labor saving devices, new methods, new ideas and reorganization. Some occupations which were common several years ago are non-existent today; however, new occupations have developed which require different knowledge, skills, and attitudes. Many occupations require additional knowledge and skills.

   Date compiled in the last two months from our Student Follow-Up Study for graduates of this school indicates some revisions are necessary if future graduates are to meet the needs of employers.

2. Problem: What measures can we take in order to improve the program?

3. Courses of study which require improving:

   Related Mathematics
   Related Drafting
   Machine Shop Practice
   Carpentry

4. Committees

   Related Mathematics

   Mr. A., Chairman
   Mr. B.
   Mr. C.

   Related Drafting

   Mr. Ay, Chairman
   Mr. Bee
   Mr. Cee

   Machine Shop Practice

   Mr. D., Chairman
   Mr. E.
   Mr. F.

   Carpentry

   Mr. Dee, Chairman
   Mr. Ee
   Mr. Eff

5. July 30, 1963 - presentation of recommendations by the Chairman to the faculty. Room 100 at 3:05 P. M.

REQUEST FOR APPROVAL FOR ADOPTION OF A NEW TEXTBOOK

To: Superintendent of Schools

From: Director of Vocational Education

Subject: New Textbook

Date: July 24, 1963

The textbook currently being used in Machine Shop classes for the tenth grade is not serving the objectives of the program any longer. The reasons are:

1. The condition of the books are such that replacement is necessary. (The books have been used since 1947 and are quite "used up".)
2. The content of these books can no longer be considered up-to-date measured by today's standards.
    a. It lacks information on new manufacturing processes such as aluminum welding, atmosphere control.
    b. Does not cover new materials such as molybdenum, and magnesium.
    c. New concepts in the physical sciences are not included.
3. By reordering this text, we would not bring our instructional material up to date.

The 1963 edition of MACHINE TOOL METALWORKING will better meet the needs of machine shop students because:

1. The new text has been brought up to date by the addition of new chapters on numerical control, chemical milling, and new inspection methods typical of the space age.
2. The authors have added a workbook to be used in conjunction with the text. (This will enhance the use of the books.)
3. The authors have given complete step-by-step information on each basic machine shop operation. It emphasizes broad concepts in regard to all machine tools. Particularly appealing to the reader is the use of modern type, contrasting color and a format

which makes the text more easily read and understood. The hard-backed cloth cover adds durability.

4. All new words and terms are defined so that the student will quickly develop the vocabulary of the trade. The reading level of this text has been carefully checked so that it should be easy for students of high school age to read and comprehend. A large number of photographs and illustrations are closely correlated with each topic.

5. Text description.

   TITLE: MACHINE TOOL METALWORKING PRINCIPLES AND PRACTICE

   Author: John L. Feirer and Earl E. Tatro

   Edition: 1st edition, copyrighted 1961

   Publisher: McGraw-Hill Book Company Inc.

   Price: $8.75 each, less school discount.

6. The authors have based the coverage of this book on the results of recent research concerning students who have graduated in machine shop practice. The text has recently been adopted by the Edison Technical High School in Mount Vernon, New York.

THE UNIVERSITY OF THE STATE OF NEW YORK
THE STATE EDUCATION DEPARTMENT
BUREAU OF TRADE AND TECHNICAL EDUCATION
ALBANY

EVALUATION OF A COURSE OF STUDY

Subject ______________ Grades covered ______________
Name of Curriculum ______________ Date ______________
Teacher ______________
School ______________ City ______________

Directions: Put a circle around 5 if the item rates high, around 1 if it rates low.

I Objectives
- A. Validity
  - 1. Consistent with objectives of the school and general education 1 2 3 4 5
  - 2. Recognition of interest and abilities of pupils 1 2 3 4 5
  - 3. Attainable in view of needs of industry. . . . 1 2 3 4 5
  - 4. Attainable with facilities available 1 2 3 4 5
  - 5. Recognition of activities in industry 1 2 3 4 5
  - 6. Consistent with laws and regulations 1 2 3 4 5
- B. Arrangement
  - 1. A few, broad, general objectives 1 2 3 4 5
  - 2. Specific, in detail to indicate
    - a. Vocational
      - 1. Knowledge 1 2 3 4 5
      - 2. Skills 1 2 3 4 5
    - b. Educational
      - 1. Traits 1 2 3 4 5
        Reflective thinking, ability to visualize, character traits, etc.
      - 2. Attitudes 1 2 3 4 5
        Cooperation, willingness to work, etc.
      - 3. Clearly stated 1 2 3 4 5

II Content
- A. Nature of material
  - 1. Closely related to objectives 1 2 3 4 5
  - 2. Comprehensive, complete 1 2 3 4 5
  - 3. Crucial importance 1 2 3 4 5
  - 4. Frequency considered 1 2 3 4 5
  - 5. Functionality, standard practice 1 2 3 4 5
  - 6. Provides for individual differences 1 2 3 4 5
  - 7. Provides for motivation 1 2 3 4 5
  - 8. Provides for skills 1 2 3 4 5
  - 9. Selected scientifically 1 2 3 4 5
  - 10. Considers learning on job vs. in school . . . 1 2 3 4 5
  - 11. Appropriate to facilities 1 2 3 4 5
  - 12. Adapted to local needs 1 2 3 4 5
  - 13. Provides for integration and correlation with other subjects 1 2 3 4 5
  - 14. Provision for developments of traits, attitudes 1 2 3 4 5
  - 15. Provides for development of safe practices 1 2 3 4 5
  - 16. Meets approval of vocational advisory committee 1 2 3 4 5

B. Arrangement

1. Arranged in large "natural" units 1 2 3 4 5
2. Logical and psychological 1 2 3 4 5
3. In order of learning difficulty 1 2 3 4 5
4. Time allotment to each unit 1 2 3 4 5
5. Provision for review, summary 1 2 3 4 5
6. Reference for both pupil and teacher . . . 1 2 3 4 5

III Activities for Pupils, Problems, Projects

A. Nature

1. Closely related to objectives 1 2 3 4 5
2. Provided for motivation 1 2 3 4 5
3. Actual vs. pseudo jobs 1 2 3 4 5
4. Provision for drill, skill 1 2 3 4 5
5. Standard practice followed 1 2 3 4 5
6. Feasibly with facilities available 1 2 3 4 5
7. Provision for individual differences . . . 1 2 3 4 5
8. Involve intellectual effort 1 2 3 4 5
9. Involve creative effort 1 2 3 4 5
10. Involve planning 1 2 3 4 5
11. Flexibility to meet varying conditions . . 1 2 3 4 5
12. Meets approval of industry 1 2 3 4 5

B. Arrangement

1. Involve all learning units without "missing links" or excessive repetition 1 2 3 4 5
2. Proper sequence 1 2 3 4 5
3. Well classified, easily located 1 2 3 4 5
4. Correlates with other subjects 1 2 3 4 5

IV Evaluation and Measurement

1. Provision for pretests 1 2 3 4 5
2. Provision for mastery tests 1 2 3 4 5
3. Mastery tests related to objectives 1 2 3 4 5
4. Provision for progress charts and pupil records 1 2 3 4 5

V General

1. Usable table of contents and index 1 2 3 4 5
2. Neat in typography and make up 1 2 3 4 5
3. Important phases emphasized in make up . . 1 2 3 4 5
4. Well bound and convenience to use 1 2 3 4 5

Prepared by
W. N. Fenninger
Revised July 3, 1963

SECTION VI

PRESENTING VOCATIONAL EDUCATION TO THE COMMUNITY

PRESENTING THE VOCATIONAL PROGRAM TO THE COMMUNITY

1. Administration Initiates Public Relations:

This type of public relations should conform with general school practice. It should follow the channels laid down by the administration. Each school principal should be given the responsibility for public relations related to the activities within his school. It is most important that all efforts toward public relations for the entire school system be coordinated in order to provide a united front.

2. Teacher Initiated Public Relations:

In order to gain maximum support, a teacher must plan and carry out a plan for positive public relations. Reports of class activities reach the public whether they are planned or not and sometimes may have adverse effects. The teacher must take the initiative in planning and carrying out a public relations program which is aimed at making friends and gaining support for his field of vocational education. Some suggestions aimed at helping the teacher are as follows:

(1) When planning the years class schedule, include regular public relations activities for both day and night school activities.

(2) Include public relations activities as part of the program in class. By this is meant labeling things made in the shops, etc.

(3) Prepare a personal calendar of public relations work.

(4) Build public relations activities around current developments in the community.

(5) In order to get the program before the public often, plan some activities regularly.

(6) Cooperate with the public relations effort of the whole school.

(7) Channels of communications should be established and kept open so that the guidance department can be kept informed of your work.

(8) Cooperate with the State Vocational Association and aid their legislative efforts.

3. Action Taken By The Advisory Committee:

Advisory committee members can help directly in publicizing the vocational program and in building good relations with the general public. In addition to the vital fact that their assistance makes it possible to provide the kind of service which one can "sell" to the public, members of the committee can be extra "salesmen" for the project.

Points to be considered when working with advisory committess are:

(1) Inform every member of the committee's function and responsibility at the first meeting.

(2) Meet often enough and regularly enough to be thoroughly informed about developments and the progress of the program.

(3) Prepare and send an agenda to each member so he will be able to study the problems and topics prior to the meetings.

(4) All facts pertaining to the phase of the program with which the committee is concerned, should be made available to it.

(5) All recommendations and suggestions of the committee should be made a matter of record of the committee.

(6) It is important that the minutes of the minutes of the advisory committee be:

Written
Kept on file
Sent to the Committee members

Brought to the attention of the superintendent, principal, and other interested parties, through proper channels.

(7) At each meeting a report should be made concerning:

Progress of the work

Difficulties encountered

Action taken on pending recommendations

(8) Members cannot be expected to carry out functions in which considerable detailed work is involved.

In must be remembered that your advisory committee, if selected properly, is in an excellent position to counsel and advise the school board. These men are the authority on vocational education and as such, play an important role in its success. They can turn an indecisive Board member into an enthusiastic helper. They should keep in mind that they have no administrative authority but as labor and management "authorities" their recommendations to the Board can be of great value concerning:

(1) Training needs and possibilities including placement opportunities.

(2) Types and kinds of curricula and course content.

(3) Qualifications of instructors and other personnel.

(4) Housing, equipment and supply requirements.

(5) Production in work at the school shops.

(6) Public relations and publicity.

(7) Program evaluation

(8) Recruiting, counseling and guidance of students.

(9) Counsel and advise boards of education on results of area surveys.

4. Present the Vocational Program To The Community Through The Following Media:

(1) PUBLIC SPEAKING:

"Vocational education personnel are not expected to be "silver tongued orators" but they should know how to prepare and deliver a talk properly.

"Every opportunity should be utilized to tell the vocational education story, orally, and in person. One cannot be content with an occasional report to the Board of Education and an annual talk to the Rotary club. He cannot rely on speeches made by the local director or principal. Teacher, and student too, can do a good job of interpreting and promoting the vocational program.

"Some hints to speech makers:

(a) Be direct and straight forward.

(b) Put your audience at ease by being at ease yourself. Look at your audience. Avoid random movements. Converse with the audience.

(c) Know what you are talking about, then, when you speak, it can be done with authority.

(d) When you talk to a group, impress upon yourself the fact that you know more about the subject than the group to whom you are talking. This will help you sound convincing.

(e) Concentrate on communicating the idea and ideals behind your program to your listeners.

(f) Speak clearly, in language on the plane with your listeners. Simple English is easier to listen to than involved sentences and long words.

(g) Keep references to yourself, your honors and accomplishments out of the speech as much as possbile.

(h) Make an outline which is easy to follow. Develop a few key points and back each with facts and illustrations.

(i) Have a good beginning and ending to your speech. Even if you must "ad lib" it is best to prepare these parts so you know when to stop as well as how to start.

(j) Get the attention of the audience with an anecdote, story, joke, or question about your program. Be sure that the joke actually introduces your subject.

(k) Since the previous speaker may have stolen most of your ammunition, you had better take along a little extra to use in an emergency.

(l) Prove points with human illustrations that tell your story.

(m) Find out ahead of time all you can about the group to whom you are to speak, so you can aim your words at their specific interests and current needs. Link the vocational education program to the listeners daily lives and show its importance to them.

(o) Write a new speech or rework an old one carefully for each occasion. This procedure will assure the fresh approach which makes a speaker popular.

(p) Keep a file of material, ideas, random thoughts, unusual happenings, good stories, news clippings, and the like. These can be used in preparing a speech.

(q) Ask the audience to do something such as read the schools handbook, visit your shop, attend the school open house, or tell others about the vocational education program.

(r) Don't talk too long. You may kill your gains with extra words."[1]

In short "a clear-cut statement delivered in an ordinary conversational tone will serve admirably."[2]

"Be agressive about finding and making opportunities for school people to talk about vocational education before other groups in the community. The telephone directory contains lists of clubs, veterans groups, fraternal organizatiins, religious groups, women's clubs, hobby groups, youth organizations, civic associations and social agencies. Check the listings and make arrangements to tell your story to as many as possbile each year."[3]

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[1] Humphrey, Livingston, Mears, Pelin, Bohrer, Woodruff, Organization, Administration and Supervision of Vocational and Practical Arts Programs, Oswego, New York, 1960.

[2] Jacobson, R. B.; Reavis, W. B.; Logsdon, J. D., Duties of School Principals, New York: Prentice Hall Inc., 1950 pp 791.

[3] Stewart, Beck, Cadro, Guido, Hockenberger, Patterson, Thomas, A Pattern for Establishing A Community Program of Industrial Education, Oswego, New York, 1957

TALK
TO
JUNIOR HIGH GUIDANCE COUNSELORS
ON
VOCATIONAL EDUCATION

1. Introduction

   A. What is our educational philosophy?

   B. A suggestion:

   "The general purpose of education is to teach the individual to live a useful, a happy, and a successful life in a democratic society. A good life can be attained through the continuous process of educating people to develop high democratic ideals of citizenship and by protecting life, health, and family living. To meet this goal the scope of our educational system should be designed to meet the needs of individuals of every age group. Each member of our society should have equal educational opportunity regardless of racial, religious, or political background. It is the responsibility of education to guide changes in behavior and attitude so individuals will develop a willingness to accept civic and moral responsibility. Education should develop the whole individual by delving into all aspects of life rather than placing the emphasis on one particular area such as science. Creativity and appreciation of the esthetic values, important factors in our culture, need to be emphasized in the educational plan. Education promotes economic stability through teaching individuals to meet vocational responsibilities and to be occupationally competent.

   "This educational philosophy put forward by Leslie C. Spiers, a machinist journeyman for Ford Motor Company and a part time student at Wayne State University, is pretty sound and closely resembles that of this school. From a sound philosophy we can derive an educational program that will accomplish great things.

2. Types of courses

   A. If we propose to follow our educational philosophy, then we owe it to any student who can profit by it to make available courses in vocational education.

   B. We offer training in:

      (1) Carpentry trades
      (2) Metal Working Trades
      (3) Automotive trades
      (4) Service Trades

C. The Vocational Program parallels the academic program because it requires:

1. Mandatory subjects
  A. English
  B. Social Studies
  C. Science
  D. Physical Education

2. Elective Sequences

  A. Shopwork in previously mentioned areas
  B. Related subjects

D. Therefore -- The Vocational Program requires the type of student with the ability parallel to that of the Regents student.

E. Mechanics of the Vocational Education Program

1. Length of Class Sessions - 180 hours
2. Number of Sessions - 5 3-hour
3. Course Duration - 3 years
4. Credit Granted - 1 unit per year
5. Prerequisites

  a. Effective testing program in Junior High
  b. Industrial Arts Courses advisable
  c. Strong interest and aptitude

F. Student Referal

1. Type of student
2. Reason subjects taken in Jr. High are vital

3. Opportunities

A. Recent trends in employment
B. Further training statistics
C. Possible earning power
D. Fields in which there is an urgent need now
E. The future --?

4. Why students should take Vocational Education.

A. No difference in structure or pattern from General Education
B. Quicker economic stability
C. Promotes Mental Health
D. Creativity outlet unmatched
E. Promotes happy, useful and successful life
F. Compare percentage of those becoming scientists to those is a vocation
G. Develops the whole individual better

THE NEWSPAPERS

The general public may be told the story of vocational education through the newspapers. Newspapers are in business to present the news, and it is the job of the personnel involved in vocational education to seek out the news, organize it and put it in a form that the newspapers will carry.

News articles presented should be short, to the point, and should explain why the schools are offering this program. Newspapers want a steady day by day year around coverage of the news.

"It pays to make up a yearly calendar of events that call for newspaper publicity. Fill in the missing spaces with feature stories which involve no particular time element, to make up a full calendar of news releases." (See suggested forms)

Some suggestions for the writer are:

(a) Write in newspaper style. News stories are written in reverse pyramid style.

(b) Answer the five "Ws" in your lead.

What happened?	When did it happen?
How did it happen?	Where did it happen?
Why did it happen?	To whom?

Your Public Relations. Washington. American Vocational Association, 1954, 88p.

(c) Keep all paragraphs and sentences short.

(d) Use clear and concise English

(e) Avoid the use of cliches

(f) Use variety in your lead

(g) The qualities of a good release are:

   (1) Does the release answer all questions the reader wants to know about the story?

   (2) Does the release play up feature elements of the story? Does the story give the reader the essential news in the first few paragraphs?

(3) Does the story cite the authority on which information is based?

(4) Are the individuals who are mentioned identified properly?

(5) Is the story easy to read?

(6) Do you avoid the use of academic or scientific terms that may be difficult for the layman to understand?

(7) Does the release avoid story padding? Too often a two paragraph story is padded out to two pages. We suggest that the story should be told in simple, fast, easy to understand, terms. Don't try to stretch a story with the idea of getting more space that way.

(8) Does the story induce the reader to continue to the end?

(9) Does the story maintain a sense of proportion and good balance?

(h) What does the editor want?

(1) Is it timely?

(2) Is it important?

(3) Is it newsworthy?

(4) Is it written in good newspaper style?

(5) Is it **broad?**

(6) Is it of enough general interest for the paper?

(1) (see attached forms)

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(1) Fine, Benjamin and Anderson, Vivienne, The School Administrator and the Press, New London; Arthur C. Croft Publications, 1956, 112 pp.

News Release (Date)

VOLUNTEER HELP NEEDED

Volunteer help is urgently needed to assist in the Community Survey on Vocational Education being sponsored by the Board of Education to determine the vocational training needs of this area. In announcing the beginning of this survey, Mr. J. J. Jay, Director of Vocational Education, said that workers would be asked to contact key industrial personnel and return completed interview questionnaire forms to the Director. A short training program outlining their duties has been set up for volunteer interviewers.

If you have a few hours a week to give to this essential community survey, please contact the Director, Mr. Jay, at the Vocational Office in the High School at 38 West Street between 8 A.M. and 5 P.M. any day this week.

Mr. Jay said that preliminary plans are complete but the assistance of public-spirited citizens is vital to the completion of the project.

Mr. Alexander F. Jones, Executive Editor
Syracuse Herald-Journal
Herald Place
Syracuse 1, New York

July 5, 1963

Dear Mr. Jones:

Last night was "open house" at Central Technical High School. An interesting inquiry came to my attention, and feeling that other parents may have the same question, I should like to take this opportunity to present the facts to all parents and students.

Several parents approached our cosmetology teacher and inquired about the necessary forms to fill out and fees to be paid in order to enroll their daughters in the program. The parents were astonished to learn there are no fees for cosmetology or any other program. One parent had actually been led to believe there as a $90.00 enrollment fee.

I would like to make it clear to all parents and students, (1) there are no fees for any courses at Central Tech for high school students; (2) that students are selected for industrial and technical programs on the basis of a personal interview and qualifying examinations held each year.

It would be a service to the community if this letter appeared in your "Letter To The Editor" section.

Sincerely,

William A. Izzo
Director Vocational Education

Forms to use in organizing a press program.

(A)

Local Press Contacts

Name	Position	Newspaper	Tel.No.

(B)

Press People Invited to this Years Special Events

Event	Date	Location	Press person invited	Position	Response

(C)

School Calendar of Events

Month, Day	Event	Coverage
Sept.		
Oct.		
Nov.		
Dec.		
Jan.		
Feb.		
March		
April		
May		
June		

TWELVE-MONTH SCORE CARD OF COURSES, EVENTS AND MATERIALS THAT CAN MAKE EDUCATIONAL NEWS

List of sources events and materials	Nature and/or name and date of news	When and where released	When and where used
1) What is being taught?			
2) Method of teaching			
3) Staff members			
4) Pupils			
5) Parent-community participation			
6) Annual reports			
7) Surveys and studies			
8) Stories dealing with the cold war			
9) Anniversities			
10) Annual events			
11) Speeches			
12) Meetings or conferences			
13) Exhibits			
14) Drives and campaigns			
15) Elections			
16) Donations			
17) Research projects			
18) Scholarships			
19) Editorials and articles in school publicity organs			
20) Death or retirements			

3. Radio and Television.

Administrators and teachers in every field should recognize the impact radio and television have as public relations media.

Radio and television stations give time to public service programs and, consequently, are willing to help plan and promote vocational education material.

Vocational education administrators and teachers would do well to consider the following as a means of getting on the air:

a. Become acquainted with the radio station staff in your community. A friendly station manager can assist immeasurably in telling the story of vocational education.

b. Before starting to work on a program, visit local stations during a rehearsal or broadcast and observe the activities.

c. Concrete programming plans must be made before asking for time. The station management cannot guess what you mean by "an interesting series of interviews describing shop work". Your "presentation" should be as complete and impressive as possible, so that it can effectively convey your ideas to the station.

For example; on video tape, transcribe an interview with a student who has been working on an engine lathe. In the course of the interview bring out the fact that this student has come back to school to learn more about machine shop work through instruction and shop work. He can demonstrate some of the things he has learned in this way (pick one or two spectacular operations). Or, he can tour the shop with the interviewer pointing out some of the features of each machine he has learned to use and how it has improved his chances for advancement.

d. The station may be reluctant to give the school time at first, because they fear "education" programs may be dull. Do not become so engrossed in getting across the message that you fail to attack the basic problem of gaining and holding the attention of an audience. Each program must be interesting as well as informative to hold a listener's interest. For example, you might accept a poor spot in the daily schedule and prove that your program has sufficient interest to raise the rating for that spot. Use as much showmanship as you can effectively muster. A human interest story acted out by several students will draw a lot of attention. Continuity from program to program is essential to get the audience to come back for more.

e. Do not complain about the hour offered for school broadcasts. If your program is good enough, it can attract an audience. You may even be able to boost the audience rating for the time you are allotted. This will increase your popularity with the management.

f. The local station will assign its staff of technicians and specialists to assist in preparing your program, providing it carries a real message.

4. Student Exhibits.

Exhibits are a natural for vocational teachers as a means of keeping students, other school personnel, and the general public informed of the work being done in the program. More than any other classes in school, the vocational classes lend themselves to publicity through exhibits.

Inexpensive but effective ways to tell the story to the public, exhibits must be carefully conceived and well-planned. Every exhibit must be designed for a specific purpose with special appeal to certain groups.

It is not that exhibits are to be in schools alone. They are more effective when held in the community in such places as store windows, railroad and bus terminals, industrial plants, theatres and grange halls. Exhibits are not a prerogative of the school alone. Manufacturers, industries, and businesses can be encouraged to present exhibits on behalf of vocational education. Effective exhibits will include colorful charts, posters, mock-ups, cut-aways, movies, slides, recordings, parts and assembly equipment.

Some helpful hints for implementing student exhibits in several forms are as follows:

a. Posters

(1) Keep them simple.
(2) Use dignified but modern type or lettering.
(3) Use color where ever possible.
(4) Avoid amateurish art work.
(5) Use pictures or drawings to attract attention.

b. Window displays

(1) Use photographs showing activities of your program, students at work, projects made, etc.

(2) Display objects, projects made, models and equipment used in the program.

(3) Use movement to gain attention; have students in action; a movie projector, equipment in operation.

(4) Don't use a lot of statistics. Make comparisons using graphs and pictures.

(5) Combine many techniques, such as color, action, photography, but keep the display free of too much detail. It may discourage people from looking and understanding.

(6) Keep it simple, direct, uncluttered; avoid attempting too much show.

(7) Include concise descriptive placards, at eye level and large enough for easy reading.

c. Exhibits

(1) Have some hand-outs with your exhibit.

(2) Use many people in your planning.

(3) Whenever possible, station teachers or students at the exhibit to explain the vocational program.

(4) Insist on good lighting and a suitable background.

(5) Show various phases of your program.

(6) Change the exhibit before it becomes stale.

(7) Make provision for protection of the display.

d. A Specific Exhibit.

Set up a committee to plan an exhibit of engine overhaul by a group of students from the auto shop. Have one person in charge of lighting the exhibit so that features of the exhibit are highlighted. Have another in charge of blowing up large photographs of auto shop work to use as a background. Plan to have one group of students mass-producing give-away feeler gauges for point setting and spark plug setting. Have two students explain how to use them to viewers and to tell about the vocational program. Post signs showing what school is working. Make sure some students are at work while the exhibit is open and lock all doors when it is over.

A SAMPLE OF A STUDENT EXHIBIT

TITLE: The Secret Of Mass Production

PURPOSE: To explain what is needed in the mass production of an object.

LOCATION: To be displayed in a 3 foot by 5 foot show case in the high school for a period of not more than two weeks.

NATURE OF THE EXHIBIT: Show the steps in the sequence of the fabrication of raw materials into the finished product.

1. Planning
   - a. a tool designer designs a gang die by making a rough sketch.
   - b. The designer makes detailed drawings of the gang die for producing the square key tag.

2. Skill

   The tool and diemaker builds the tool from rough material.

3. Production
   - a. Set up the Punch press operation
   - b. Set up the stamping operation
   - c. Set up the finishing operation

4. Setting up the exhibit
   - a. Line up each operation in production sequence (use signs to explain)
   - b. Drawings of designs are mounted on the background with colored strings connected to the tools they illustrate. (use signs to explain)
   - c. Raw materials are connected to the finished product with strings. ie. raw materials are connected to the punch press and other equipment. (use signs to indicate that the missing ingredient is skill)
   - d. The finishing process is pointed out by the use of signs and strings directed toward a finished product.

BASIC PROCEDURE APPLIED TO THE EVALUATION OF VOCATIONAL PROGRAMS

"Evaulation is the process by which we determine whether we have accomplished what we have set out to do. It is an integral part of the teaching and learning process. No program of vocational and practical arts education is complete unless it includes a planned program for the appraisal of results. Administrators and supervisors must be familiar with the principles and techniques of evaluation and have a systematic plan for carrying them out."[1]

Evaluation procedure:

1. Measure pupil progress.
    - a. What are the objectives of the courses?
    - b. What was pupil status before taking the course?
    - c. How far did he advance as a result of the course?
    - d. Check on results to see that they are fair and accurate.
2. Evaluation of teaching through supervision.
    - a. Purpose is to help the teacher do better.
    - b. How to find out what is being done.
        - (1) observation
        - (2) pupil progress and test results
        - (3) pupil reactions
        - (4) teacher conference
        - (5) teacher participation in other activities
        - (6) teacher attitudes
        - (7) rating scale results
    - c. What abilities are used and how?
        - (1) Classroom teaching ability
        - (2) Teacher-student relationships
        - (3) Personal qualities of the teacher
        - (4) Professional relationships with others.
3. Evaluation of the program.
    - a. Periodic surveys need to be made to determine whether the program is meeting its objectives.

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[1] The University of the State of New York, Administration and Supervision of Vocational and Practical Arts Education, Albany, New York: June 1954. p. 77.

b. Advice and counsel of employers and labor should be sought as well as the school personnel in evaluating results.

c. Placement and follow-up studies need to be made.

d. Analyze and evaluate program with respect to:

(1) organization
(2) nature of offerings
(3) physical facilities
(4) instruction.

SECTION VII

TRENDS

TRENDS IN VOCATIONAL EDUCATION

Many administrators feel that students should wait until the last possible minute to choose a vocation because their education background is too limited at that early stage to make a sound decision. Secondary education is the last formal educational institurion for the majority of youth. But the facts dictate otherwise:

Statistics show that 75% of those who graduate from secondary education courses do not go on to further education but join the labor force. Of these 5.5 millions were unemployed between 1957 and 1961. In 1962 there were 72 millions in the work force nationally and 4 millions unemployed. By 1970 the labor force will have grown to 87 millions and the unemployment figure will stand at 5.6 millions.

There will be a growing need for the following jobs which obviously need special education and training. They are: Professional, Technical, Sales, Agricultural and Public Service. At the same time there will be a diminishing need for the following job classifications: Labor, unskilled, and some agricultural activities. Those employed in the latter will come from the 75% who left formal education by the end of their 12th year. There will be only 25% high school population available with the necessary training to fill the increasing number of jobs in the classifications where special training is needed.

1. Where is the labor force coming from to fill the increased number needing specialized training?

2. What are we going to do with the increasing number of people who can only be placed in the decreasing number of classifications?

3. What are we going to do with the increased number of the unemployed who do not have specialized training and cannot fill specialized jobs?

Increased attention to vocational education at an earlier age will help this situation. How?

We must study the situation through surveys and then analize the results. We must then define the problem area. Next, we must determine the best methods for the solution to the problem. Personnel must be selected who can best provide the leadership necessary to do the job and finally controls must be set up to guide the efforts of all concerned.[1]

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[1] Olivo, Thomas C. A lecture on "Trends in Vocational Education." State University of The State Of New York, College of Education in Oswego, New York. July 30, 1963.

Manpower Development Legislation and its Effects on Local Programs

The Manpower Development and Training Act is a piece of Federal legislation which was approved in March, 1962. For a period of 4 years it provides for the development of specialized vocational training to meet the needs of at least some of the unemployed. The measure is not the complete answer for solving the nation's unemployment problem or meeting the needs of vocational training. However, it is expected to help many unemployed youths and adults to acquire skills and knowledge in order to find employment.

From Federal To State Level

To implement the MDT (Manpower Developing and Training Act), the U.S. Department of Health, Education and Welfare and the U.S. Department of Labor are required to work cooperatively to distribute funds to the 50 States. Training programs must be approved to meet the provisions of the Act. $500 million have been allocated for MDT.

On the State level, the New York State Department of Labor and the State Education Department have major responsibilities determining needs with the authority to allocate funds to local Board of Education (or sometimes to a private school) to carry on approved training programs.

Role of Employment Service

Observing the procedures included in the new Federal legislation, State Division of Employment personnel must locate jobs, select the number of workers to be retrained, define the skill requirements for each job category, counsel jobless persons available for training and refer qualified trainees to the vocational schools. Persons satisfactorily completing retraining courses will be referred back to the Employment Service for placement.

State and Local Participation

State Education Department personnel appraised the job information provided by the Employment Service and designated school districts qualified and equipped to conduct needed training. Local vocational educational staffs were aided in developing training proposals, including teaching outlines, organizational details and budgets of anticipated expenditures. Participating schools are paid for conducting retraining courses when proposals are certified and approved by appropriate State and Federal officials. While the Education Department makes arrangements for training, local schools provide facilities, employ personnel and provide other services pertinent to the operation of quality programs. Advanced allocations or reimbursement by the Education Department include actual expenditures for salaries of teachers, supervisors, and clerical personnel, needed equipment, expendable supplies, instructional aids, heat, light, cleaning costs and other items allowable under the provisions of the Federal Act.

Education Department specialists continue to work with local educators after proposals have been approved. Course outlines are revised, instructors upgraded, equipment needs appraised, teaching improved, records maintained, budgets revised and audits systematized. As in previous Federally financed programs, Federal agencies establish policies and some procedures, the State Education Department administers, supervises and accounts for funds, and local Boards of Education organize and conduct instructional programs. Different in many ways from adult programs operating under provisions of other

Federal vocational education legislation, the MDT program mandates a desirable working relationship with State and Local Employment Service personnel.

The Place of MDTA in Vocational Education

The retraining of the unemployed and upgrading of those underemployed is a significant part of the total task of vocational and technical training.

Present enrollment trends indicate that the same public educational institutions that constitute the primary resource for the estimated 400,000 MDTA trainees, must also in the next 3 years provide training at secondary and postsecondary levels for the approximatley 15 million young people and adults, who are not eligible or who have no priorities under MDTA. These people are seeking to educate, upgrade, and update themselves in high schools and high-school-based adult programs, area vocational schools, public junior colleges, technical institutes, and non-profit universities and university extension programs, under a variety of full-time or part-time arrangements. Obviously, in the light of recent economic changes, education and occupational skills are increasingly needed by all people. To meet the challenge of technological change, to support economic growth, and to guarantee the eqwal access to educational opportunities is the most vital value of an open democratic society. Vocational and technical education must be available to a substantially greater proportion of young people and adult than at present.

To meet the needs of the immediate future, the Vocational Education Panel estimates that 22.8 million young people alone must be accommodated in vocational and technical education in the year to 1970. We do not have any estimate, as yet, of the total numbers of employed and unemployed adults who must be accomodated if their occupational obsolescence is to be precented or alleviated, nor of the number of times people in various occupations must be retrained during their working lives. Mere continuation of current vocational and technical education enrollment trends will not permit any major changes in the proportion of young people who drop out before completing high school. Neither will it enable us to provide opportunities for any significant proportion of past dropouts to return for more basic educational and vocational or technical training, nor provide similar training for those persons with only an 8th-grade education or less who now constitute over one-third of the total of the persistently unemployed.

The outstanding contribution MDTA can make, at all levels of planning and to vocational retraining programs, is systematic coordination in relation to current estimates of local labor markets.[1]

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[1] Report of the Secretary of Health, Education, and Welfare to the Congress on Under the Manpower Development and Training Act.
U. S. Department of Health, Education, and Welfare Office of Education, 1963.

SECTION VIII

SUMMARY * * CONCLUSIONS

CONCLUSIONS

The early pioneers of vocational education gained their administrative skills, techniques, and knowledge through experience by beginning with small programs and developing them into larger ones. Today the vocational director must learn to be administrator by studying administrative principles and applying the principles to problems in vocational education. Today credits and degrees are required for certification.

This handbook contains sample problems and solutions in administration peculiar to vocational education. The experience gained in working toward the solution of these administrative problems marks the beginning of similar experiences expected in the profession.

SUMMARY

The local director is the administrative head of the total program of vocational education; which often includes the practical arts and adult education programs.

The administration of a comprehensive program of vocational and practical arts education presents many complex and highly technical problems and should be under the direction of a person with the necessary qualifications and technical knowledge. Any school system large enough to have such a program should employ a director with specific authority and responsibility for the program.

The local director must be a key person in the school system capable of initiating new programs, improving and expanding existing facilities. He must have a thorough understanding of general and vocational technical education. The director must organise the program to meet the specific needs of his community. The director is the educational leader responsible for the effective operation of the vocational program. He is responsible for many records, reports, proposals for additional programs, and desirable school-community relations.

Administration and Supervision

Bibliography

1. A Procedure for Evaluating a Local Program of Trade and Industrial Education. Chicago; American Technical Society, 1952. 64 pp

2. Barr, A.S., et al. Supervision. New York: McGraw Hill, 1947. 879 pp

3. Briggs, Thomas H. Improving Instruction. New York: Macmillan, 1938. 587 pp

4. Coe, Burr D. Teaching Related Subjects. Albany, New York: Delmar, 1950. 137 pp

5. Coe, Burr D. "A Job Analysis of the Vocational High School Principalship." Bulletin of National Association of Secondary School Principals: Vol.37, No.198, December 1953. 102-108

6. Committee on Research and Publications. Administration of Vocational Education at State and Local Levels. Washington D.C.: American Vocational Association, 1953. 24 pp

7. Committee on Research and Publications. Service Areas for Vocational Schools. Washington D.C.: American Voca- Association, 1949. 36 pp

8. Committee on Research and Publications. The School Administrator and Vocational Education. Washington D.C.: American Vocational Association, 1950. 22 pp

9. Committee on Research and Publications. Vocational Advisory Committee. Washington D.C.: American Vocational Association, 1950. 39 pp

10. Committee on Research and Publications. Your Public Relations. Washington, D.C.: National Education Association, 1954, 88 pp

11. Douglas, Harl R. Organization and Administration of Secondary Schools. Boston: Ginn, 1945. 660 pp

12. Federal Security Agency, Office of Education. Administration of Vocational Education. (Vocational Education Bulletin No. 1, Revised 1948) Washington: Government Printing Office, 1949, 112 pp

13. French, Will, et all. American High School Administration: Policy and Practice. New York: Rinehart, 1951 625 pp

14. Froehlich, Clifford P. Guidance Services in Small Schools. New York: McGraw Hill, 1950 352 pp

15. Jacobson, Paul B., et al. Duties of School Principals. New York: Prentice Hall, 1950 791 pp

16. Mort, Paul R. Principles of School Administration. New York: McGraw Hill, 1946 388 pp.

17. Sears, Jesse B. *The Nature of the Administrative Process*. New York: McGraw Hill, 1950, 623 pp

18. Spears, Harold. *Improving the Supervision of Instruction*. New York: Prentice Hall, 1950 478 pp

19. Traxler, Arthur E. *Techniques of Guidance: Tests, Records, and Counseling in a Guidance Program*. New York: Harper, 1945.

20. The University of the State of New York, *Administration and Supervision of Vocational and Practical Arts Educatinn*. Albany: 1954. 157 pp

21. The University of the State of New York, *Certificate Valid for Teaching Shop Subjects (Industrial Arts)*. Albany: 1954, 3 pp

22. The University of the State of New York, *Certificate Valid for Teaching a Shop Subject (Trades)*. Albany, 1956. 4 pp

23. The University of the State of New York, *Certificate Valid for Teaching a Technical or Related Technical Subject*. Albany. 1954 4 pp

24. The University of the State of New York, *Community Survey in Determining Needs for Vocational Industrial Education.* (Bulletin No. 1284). Albany: January 1945. 15 pp

25. The University of the State of New York, Bureau of Industrial and Technical Education, *Improving Instruction Through Supervision*. Albany. 1943. 97 pp

26. The University of the State of New York, *The Organization and Administration of Vocational-Technical Courses in Secondary Schools*, (Bulletin No. 1383). Albany: 1950. 43 pp

27. U.S. Department of the Interior, Office of Education. *Statement of Policies for the Administration of Vocational Education*, (Vocational Education Bulletin No. 1, Revised 1937) Washington: Government Printing Office, 1937. 137 pp

28. U.S. Department of Health, Education and Welfare, Office of Education. *The Operation of a Local Program of Trade and Industry*, Series No. 62. Washington: Government Printing Office, 1953. 166 pp

VT 004 211
Allen, David
Innovation in Trade-Technical Teacher Education, a Report of the Summer Session. (University of California, Los Angeles, June 22-July 30, 1964).

California State Dept. of Education, Sacramento. Bureau of Industrial Education
California Univ., Los Angeles. Div. of Vocational Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 64 36p.

*TRADE AND INDUSTRIAL TEACHERS; *TEACHER EDUCATION; *PROGRAM DESCRIPTIONS; *SUMMER PROGRAMS; *COURSE ORGANIZATION; TEACHER IMPROVEMENT; PROGRAM EVALUATION

Because of the educational background and the way they enter the teaching profession, trade and technical teachers require special programs in teacher education. This program involving two six-unit summer courses, sought to provide adequate educational experiences. The first, "The Instructional Processes in Vocational Education" involved instruction in learning, psychometry, instructional techniques, development of instructional media, classroom counseling, and guidance. The second, "Principles and Practices of Vocational Education" provided a comprehensive study of the history and philosophy of vocational education, the sociological, economic, and technological environment, the scope and functions of vocational education, the development of teacher-community relations, and educational leadership. Instruction in both sessions was integrated and sequenced and utilized team teaching, programed instruction, traditional large group instruction, and small group interaction instruction. The appendix contains a key to the size of the group utilized for each activity and a list of all the activities involved. (EM)

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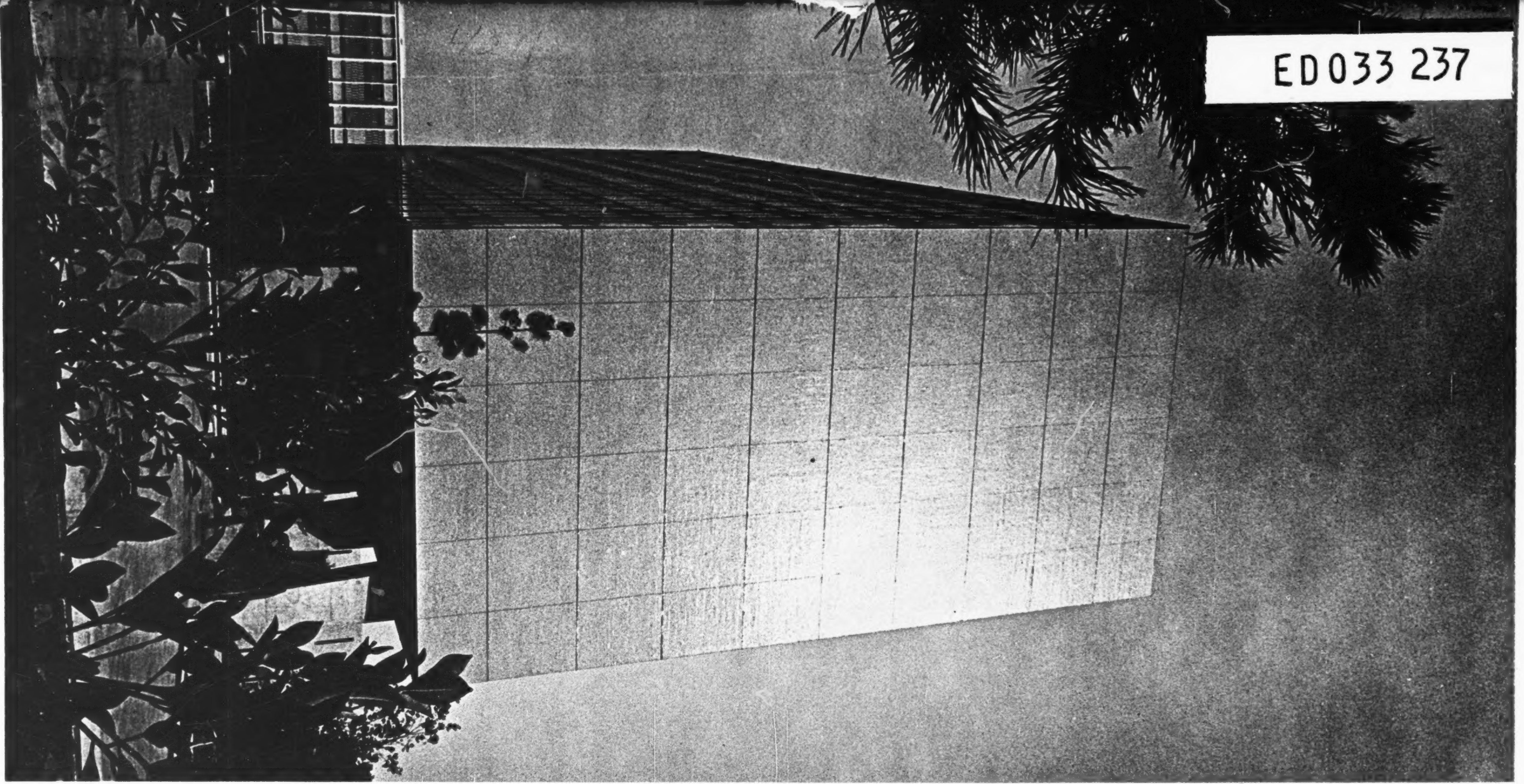

INNOVATION
IN
TRADE-TECHNICAL TEACHER EDUCATION

(CI)
36p*

COVER: The new Social Science Building where small group activity classes were held.

Photograph courtesy Nancy Naylor, Editor, UCLA Alumni Magazine

INNOVATION
IN
TRADE-TECHNICAL TEACHER EDUCATION

A Report of the
1964 Summer Session at U.C.L.A.
June 22-July 30

by

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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DIVISION OF VOCATIONAL EDUCATION
UNIVERSITY OF CALIFORNIA, LOS ANGELES
IN COOPERATION WITH
BUREAU OF INDUSTRIAL EDUCATION
CALIFORNIA STATE DEPARTMENT OF EDUCATION

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INNOVATION
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TEACHER EDUCATION

INTRODUCTION

Each profession has its unique skills, knowledges, and mores. Since these characteristics are passed on and modified by educational agencies directly related to a particular profession, the characteristics of the teaching profession are passed down by teacher education institutions. However, within each profession there are specialty areas which require specialized emphases. Trade and technical teachers are a specialized segment of the teaching profession and their teacher education requires experiences directly related to their specialization.

Trade and technical teachers begin their classroom instruction prior to, or concurrent with, their teacher education. They do not have their teacher preparation completed before entering the classroom, as is the case with other teachers. Becoming a teacher is a redirection of their working lives. On the average, they enter the profession between 30 and 40 years of age and have had an average of 11 years of successful occupational experience. These individuals, like all others, have their biases and their ideas on how things ought to be, and their acceptance of learning is related to their past experiences. As one ages, the malleability that allows the acceptance of change decreases. Trade and technical teacher educators do not have the opportunity to work with individuals who are young enough to be truly malleable; rather, they encounter them when their thought patterns have become fairly well established. Therefore, the teacher education programs developed for trade and technical teachers must anneal the thinking of these individuals, making them receptive to change, while building on their past experiences and, at the same time, devising a teacher education program that will coincide with the needs of the neophyte practicing teachers.

The organized trade and technical teacher education program in California goes back more than 45 years. During this period, two principles concerned with the selection and training of teachers have been established: (1) that the teacher of trade and technical subjects be subject matter competent, and (2) that he should have teacher education experiences that would help him transfer his subject matter skills and knowledges to his students. On the surface this may appear to be the same for all teachers. However, here again there are two basic differences: (1) trade and technical teachers obtain their subject matter competency through successful working experiences in their occupations, and (2) they obtain their teacher education while they are employed as teachers rather than through the regular curriculum as is the case of other teachers. It is very rare that an individual has both his teacher education and subject matter competency in trade and technical education prior to his initial entrance into the teaching profession. A choice had to be made concerning which of the two--subject matter competency or teacher preparation--could be postponed in order to obtain qualified teachers need to staff the trade and technical programs in the public schools. The decision was made early that subject matter competency, based upon successful occupational accomplishments, should be the first criterion for teacher selection, and that the teacher education could be accomplished during the initial years of the teacher's school experience. These principles have been followed through the many years in which trade and technical programs have been offered and have proved successful.

The challenge for maintaining and improving the teacher education program has been met by continuing effort throughout the years. Revision and adaptation of course content have kept pace steadily with new educational processes. This flexibility has permitted the development of unique programs for trade and technical teacher education.

THE PROGRAM

The organization of trade and technical teacher education summer session programs assimilates theories and practices of teacher preparation from many sources. The program utilizes team teaching, programmed instruction, traditional total-group instruction, and small-group interaction instruction methods.

The summer session program covers a two-year period and embodies a spiral approach to the subject matter presented. A deliberate effort is put into the program so that students experience emotional reactions similar to those their own students experience in their classrooms. In the area of attitudes, indirect methods are used so that no finger is pointed at any individual and yet the individuals can identify and correct attitudes that they may recognize as their own.

The first-year summer session is concerned primarily with providing the necessary knowledge and skills for classroom teaching. This program, The Instructional Processes in Vocational Education, includes such topics as learning, psychometry, instructional techniques, development of instructional media, classroom counseling and guidance,-all with emphasis on direct application to vocational education.

The second summer session, Principles and Practices of Vocational Education, provides a comprehensive study of the history and philosophy of vocational education; the sociological, economic, and technological environment; scope and functions of vocational education, with direct application to the development of vocational teacher-community relationships and to instructional effectiveness; and educational leadership.

The subject matter of these two courses is integrated and sequenced so that each instructional unit is presented in direct relationship to all other units under examination and study in the course. This method permits the learning of theory concurrently with its application.

Many hours of planning and evaluation have gone into the new program. The program will remain flexible so that, through continuous evaluation, necessary adjustments and advancements can be made. At the end of each session the instructors evaluate the day's activities, and the total program is evaluated by the students, visiting observers, and the instructors. The prime objective of the summer session programs is to help each teacher do a more effective job of teaching.

THE ACTIVITIES

Rather than describe the intricacies and sequence of the program in which the students participate, this report will describe only briefly the activities of which these courses are made up. A graphic description is also given in this report on pages 20 to 32 of the Appendix.

Five major activities were interlaced throughout the first-year program utilizing various student groupings. These five areas were student guidance, theory of learning and practice teaching, elementary statistics and teacher-made tests, development of instructional material, and organization and management of instruction. A brief statement as to the coverage given each of these topics follows:

(1) In the area of student guidance, instruction was offered to help the teacher trainees better understand their own students. Actual student records were obtained from various schools. These records were made up into a series of cumulative folders. The folder assigned a teacher trainee contained records of ten students who had attended classes in the same subject matter taught by the teacher trainee, such as auto mechanics, electronics, nursing, etc. Each teacher trainee learned how to interpret the information in the folder assigned to him. From this folder the teacher trainee selected five students, collected statistical information on them, and drew profiles of the five students. From these profiles the teacher trainee predicted success or failure of the students in their occupational training program, recommended remedial courses where indicated, and made other comments that would be made to the students in his classroom. Upon completion of the predictions and recommendations, the teacher trainee received information on the grades that each of these students had received after a year of instruction. Then each teacher trainee was required to explain why his predictions were right or

wrong. This activity had at least three objectives:

(1) It made the instructor aware that test results and data are not necessarily an indication of success or failure in a vocational program.

(2) It emphasized the fact that caution must be exercised in making interpretations of data.

(3) It helped develop an understanding of the terminology and methods used by counselors, making it possible for them as teachers to communicate intelligently with counselors.

Additional instruction was given through role-playing and case analysis on ways to counsel students.

(2) In the area of theory of learning and practice teaching, each teacher trainee was required to present a 20-minute and a one-hour practice lesson. These practice lessons were given to other teacher trainees who taught in the same subject field. Prior to their practice lesson they had an opportunity to witness a demonstration lesson using the best teaching practices of vocational education instruction. This lesson was presented by Dr. Cameron Hall, M.D., Osteopathic Surgeon, U.C.L.A. Medical Center.

Learning theory was presented using classroom demonstration methods. The teacher trainees had an opportunity to observe how learning theories appear in the classroom. Teaching methods and techniques were also presented through lecture demonstration methods prior to each trainee developing his own demonstration lesson.

Throughout the entire course opportunity was provided to discuss numerous methods and techniques of instruction. Each presentation made to the total group of teacher trainees used a different method or technique. The use of team teaching lent itself to a method by which, upon completion of each presentation by the various team teaching members, a second team teacher who did not present the lesson, would lead an informal discussion with the students on the new method and techniques they had experienced in the instruction just presented. This method presented opportunities to witness many methods and techniques rather than merely be told about them.

(3) In the area of elementary statistics and teacher-made tests, instruction was presented to give each of the teacher trainees an understanding of, and skill in, test construction and evaluation of instruction. They learned how to develop 10 different types of teacher-made examinations and had an opportunity to become familiar with professional standardized tests. Each teacher trainee identified categories of intellectual skills around which he wished to develop his test questions; for example, the categories of comprehension, application, analysis, etc. Upon identification of the categories he then compiled test questions through the use of an analysis sheet, selecting questions that permitted him to test for the categories identified. This method insured complete testing coverage. Time was provided for the evaluation and discussion of test questions so that trainees could learn to identify good and poor questions.

The development of elementary statistics concept was based on each teacher trainee's own test scores during the course. Each teacher trainee took a SCAT test on the opening day of summer session and from the results of this test he was able to utilize his own statistics for study and evaluation. He also utilized statistics from other subsequent tests which he completed during the summer session.

(4) In the area of instructional material, the prime project was the development of a course of instruction utilizing the concept of "instructional packages." An instructional package is made up of lesson analysis sheets and written instructional material developed for the use of either the student or the instructor and keyed into a lesson analysis sheet. A course of instruction is made up of a series of sequenced instructional packages. The creation of instructional packages necessitates that each teacher trainee analyzes and organizes his instruction into instructional topics that comprise a course of instruction and, at the same time, the instructional package permits easy additions and deletions of instructional material. This freedom of "easy access" for change of the course of instruction permits the instructor to keep his instruction current and flexible.

(5) In the area of organization and management of instruction, activities were concerned with developing and understanding the fundamentals of planning and organizing instructional facilities. Opportunity was provided whereby the teacher trainee developed systems for maintaining instructional flow and control. Each student developed skills for writing specifications for supplies and equipment. This whole area was directly related to those modern production methods that are best applicable to educational processes.

✓ The second-year core course also has five areas of concentration. These areas are the history and philosophy of vocational education; the sociological, economic, and technological environments affecting vocational education; the scope, function and development of vocational curriculums; the development of teacher-community relationships; and, the improvement of instructor effectiveness and education leadership. A brief statement as to the coverage given each of these topics follows:

(1) The history and philosopy of vocational education were taught in relation to the factors that affect vocational education. The factors discussed were historical development, sociological development, economic conditions, technological conditions, the aims of education, the form of education, and the types of vocational education. The development and growth of federal and state legislation were presented and students were able to develop basic skills in interpreting the requirements of new legislation.

(2) The study of the social, economic, and technological environments was accomplished through the establishment of task forces, based upon the geographical locations where the various teacher trainees taught. Each task force was required to obtain information related to the occupations represented by the individual members of the task force group. Their information had to be related to the various forces affecting vocational education in their communities. This activity developed skills in determining needs for instructional programs and keeping instructional programs current with the requirements of industry's needs, and developed an active program evaluation system. Much of the task force activity was carried on away from UCLA, but the preparation of results and the presentation made by each task force to the total group were carried out in class sessions.

(3) The task force activity had the side effect of helping students understand the basis for curriculum development. Presentation and small-group activity relating to the development of curriculum

objectives, methods, and techniques were provided throughout the entire course. The students had experiences in exploring the various practices currently used in curriculum development, thereby becoming familiar with the terminology used in industrial education. The role of the advisory committee was woven into the curriculum development portion of the program. The relationship of proper facilities, adequate evaluation criteria, and various types of consultants in curriculum development rounded out this portion of the program.

(4) The teacher-community relations portion of the program focused its attention on how the teacher could present the image of his program to the school and community. Small-group activities gave the students opportunity to learn the fundamentals of public relations as well as the preparation of news releases. Here again the necessity of being able to work with various community groups and the responsibility of the teacher to the community and the school were stressed.

(5) The area of increasing teacher effectiveness and professional leadership was developed through discussions, as a result of which the students became involved in research and reviews relating to effective teaching. They had an opportunity to gain an understanding of some of the means of evaluating one's own teaching effectiveness. Some of the small-group activity was non-directed and permitted the emergence of leadership within the group. Other group interactions were strongly structured and caused those with leadership potential to adjust to their peer group under tightly regulated conditions.

Areas previously studied in the first-year core, such as statistics, guidance, and presentation of information through use of audio-visual materials, were incorporated into the program so that greater depth of understanding of these educational tools could be emphasized.

Each of the core course classes were concluded with their own banquet and dinner speaker. The banquet speaker for the first core was Mr. Wesley P. Smith, California State Director of Vocational Education. The second core banquet speaker was Mr. Ernest G. Kramer, Chief, Bureau of Industrial Education, State Department of Education. The capping off of the summer session program with a banquet speaker and entertainment made an agreeable and relaxing termination of a summer of concentrated effort.

EVALUATION

Three sources have provided evaluation of the program,--the teachers, the students, and visiting administrators. Some of the administrators who visited the program sent letters of comment (see Appendix); in addition, several made phone calls commenting on teacher improvement. Other teachers who have gone through the program previously have commented on what they have heard from the new teachers and their observations of these teachers' improvement, stating that they would like to re-enroll in the teacher education program.

Evaluations made by the students in the summer session integrated programs have been tabulated. The first-year summer session students used an evaluation form which permitted them to write their comments concerning the strengths and weaknesses of the program. The second-year students used an evaluation form which permitted them to check their reactions to each presentation made. This second form permitted an evaluation of the lesson presented but did not specifically identify strengths or weaknesses.

Using the evaluation forms of the first-year group, we find that "weaknesses" are identified by 156 reports as follows:

14% felt that they wanted more depth of coverage;
12% remarked that they would like to have less homework;
4% believed that the course was too short.

Other than a few scattered or unrelated comments, no other weaknesses were identified.

On the "strengths" side of the evaluation, we found the following:

89% praised the organization of the program and also how well the subject was taught;
82% made statements regarding how the course would help them improve their instruction;
44% made favorable comments on how helpful the subject matter presented would be to them.

This method of evaluation did not trigger recall by the students, but rather permitted voluntary, off-the-cuff statements concerning the total program.

From the many comments made by administrators who visited the program several are listed below.

> ". . . . I can't help but reiterate that I feel the approach taken in this class is certainly one that could be used advantageously in other classes involving the teaching of potential faculty members for the junior college. The situation as I saw it was about as realistic as one could hope to have it, and the students involved certainly appeared to be convinced that they were working in a meaningful situation. . . ."

> ". . . . The day was most interesting and educational. In thinking about what I saw, I feel that your 'new look' in teacher education has some measureable advantages over the program as I knew it in 1949 -- especially your large group-small group procedures. Congratulations on a well-organized and forward-looking teacher education program."

> ". . . . My visit to the trade and technical education program July 7, 1964, was a very interesting and valuable experience. Your addition to the course presentation of the areas for a group dynamics experience is a most valuable and greatly needed area of skills in instruction. Your presentations were all good. If only all teachers could improve their communication skill, the learning or behavior changes would increase. . . ."

The summer session faculty members ran a continuous evaluation of the program during its offering. Each night after the class was adjourned the faculty members would evaluate the day's activities and make suggestions for possible changes to be made when the program would be offered again the following year. Even more beneficial, they would work out minor changes and adjustments to insure better presentations during the remainder of the session.

These instructor evaluation sessions not only analyzed the subject matter presented but also the manner of presentation and suggested ways of improving both. This daily critique resulted in daily improvement in the program as it progressed through the six-week period.

SUMMARY

Unlike the weatherman who is faced with the famous quote from Mark Twain, "Everyone talks about the weather but no one does anything about it," the trade and technical teacher educator has been trying consistently over the years to "do something" about improving the teacher education programs. The achievement of California in becoming first among the states in trade and technical education can be related directly to the effectiveness of its teachers. Throughout the last 46 years these teachers have had the benefit of specifically oriented teacher preparation programs, designed to meet their educational and instructional needs. Through these many years, continuous evaluation and consequent improvement have been designed to meet ever-changing needs.

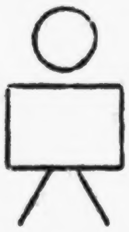
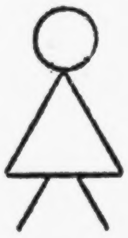
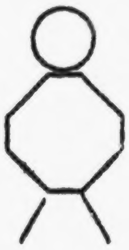
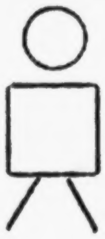
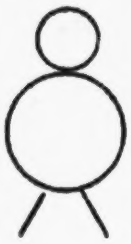
Improvement has been accelerated during the past three years by the experimental programs offered at U.C.L.A. Through the help of college presidents, deans of instruction, and state supervisors of teacher education, a teacher education program has been developed in California that measures up to the best in our country.

The present trade and technical teacher education experimental program at U.C.L.A. is composed of two six-unit courses. The first course has the prime objective of preparing the teacher to function in the classroom. The second course is concerned with the principles and practices of vocational education and uses the concept of the educational leadership of the teacher as a vehicle for instruction. The educational growth of the student teacher can actually be seen as the course progresses.

The 1964 Summer Session was extremely privileged in having the observations of several college presidents and deans of instruction from various institutions of learning throughout the Southern California area. Their comments and suggestions, as well as evaluations by the instructional staff and students, will make it possible for still further improvement and advancement in the trade and technical teacher education program.

Appendix

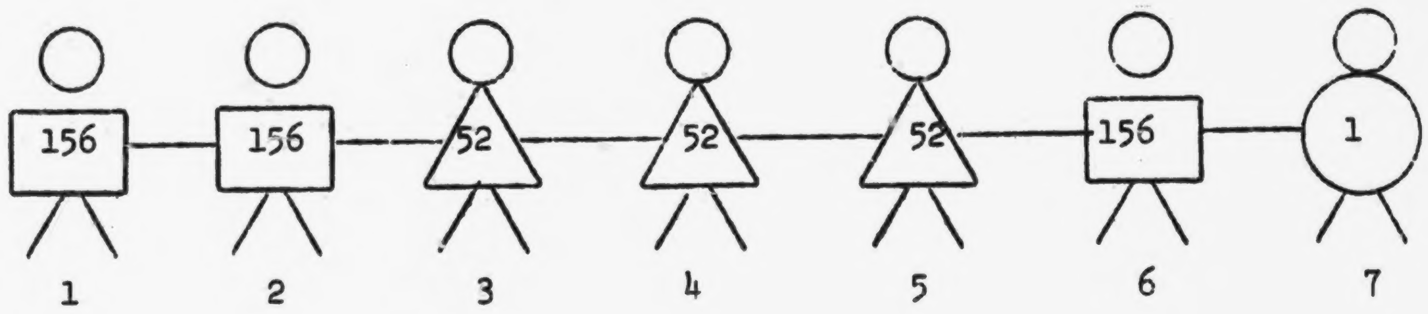
KEY TO INSTRUCTIONAL GROUPING

TOTAL	
LARGE	
MEDIUM	
SMALL	
INDIVIDUAL	

NOTE: Each figure has two numbers. The number inside the figure indicates how many students are in a particular grouping. The number below each figure is keyed to a list of activities appearing on each page.

FIRST CORE

June 22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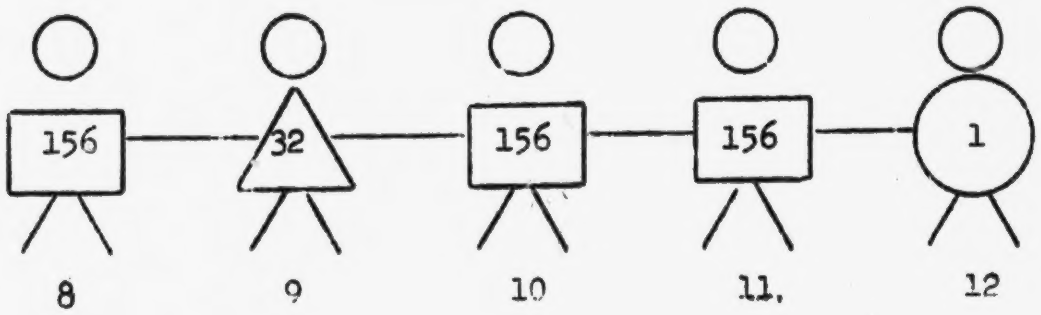
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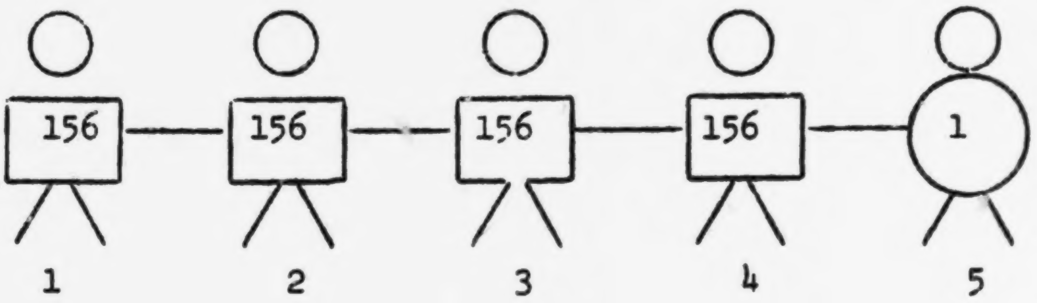
ACTIVITIES:

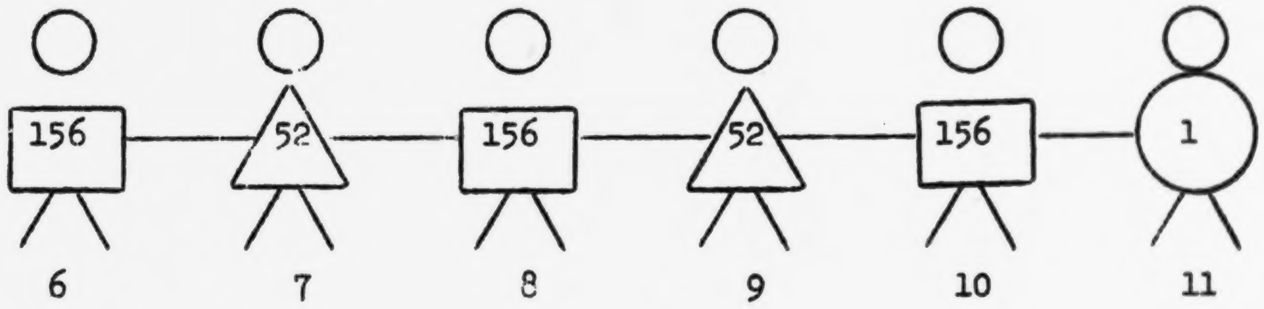
1. Introduction
2. SCAT Test Administered to Group
3. Library Skills
4. Listening
5. Notetaking
6. The Student as an Individual
7. Individual Counseling
8. Introduction to Student Cumulative Records
9. Developing Profile
10. Classroom Counseling
11. Use of Cumulative Record Information
12. Individual Counseling

FIRST CORE

June 29



July 1

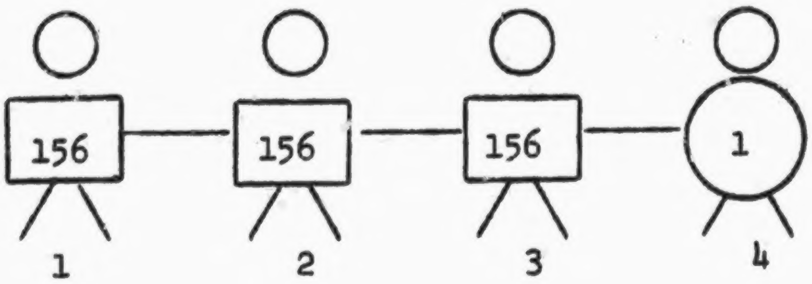


ACTIVITY:

1. "How We Walk"
2. Learning Principles and Application in the Classroom
3. Communication Problems
4. Methods and Techniques of Instruction
5. Individual Counseling
6. Selecting and Organizing Questions for Teacher-Made Tests
7. Seminar on Teacher-Made Test Organization
8. Developing Questions for Teacher-Made Tests
9. Seminar on Test Question Construction
10. Lesson Planning
11. Individual Counseling

FIRST CORE

July 6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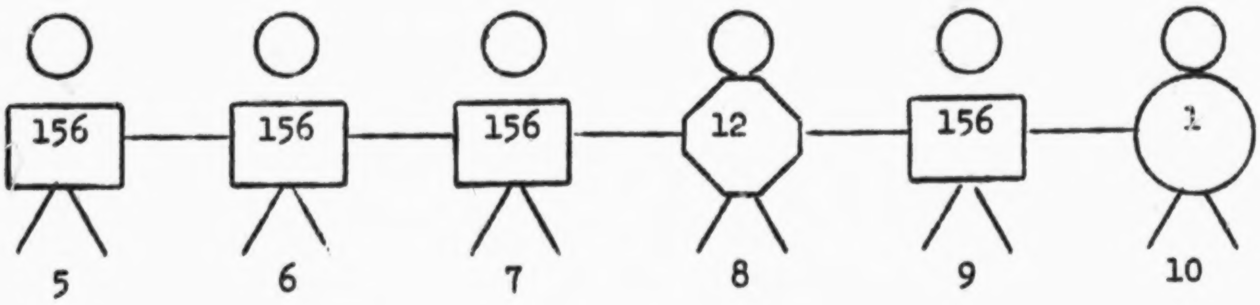
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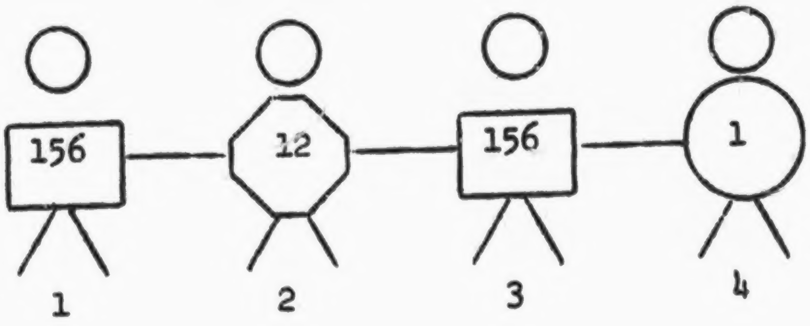
ACTIVITY:

1. Elementary Statistics
2. Instructional Package
3. Educational Psychology
4. Individual Counseling
5. Intelligence
6. Evaluation of Instructional Progress
7. Critique of Practice Lesson
8. Student Twenty-minute Practice Lessons
9. Review of Information Taught to Date
10. Individual Counseling

FIRST CORE

July 13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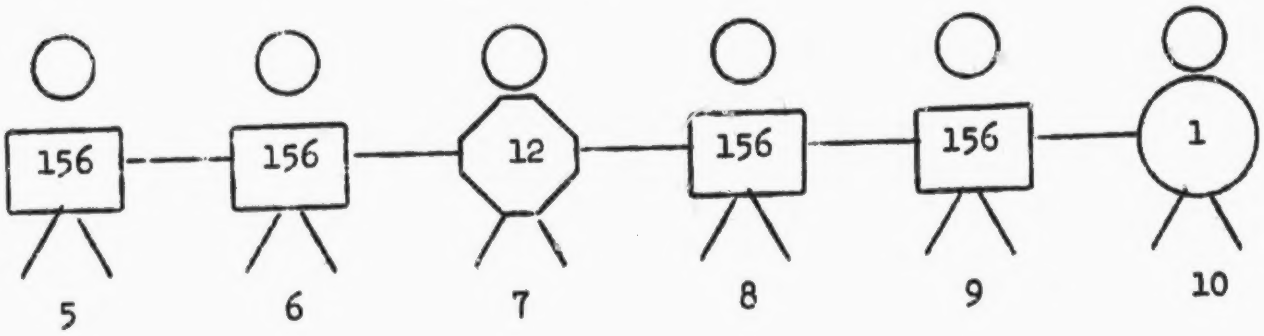
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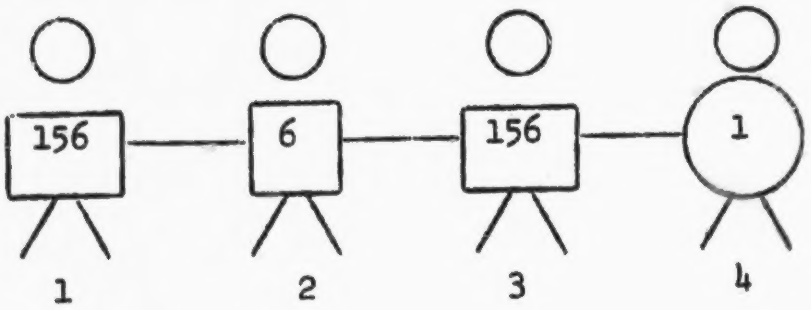
ACTIVITY:

1. Mid-term
2. Student Twenty-minute Practice Lessons
3. Standardized Tests
4. Individual Counseling
5. Item Analysis of Mid-term Examination
6. Evaluation for the Assigning of Grades
7. Student Twenty-minute Practice Lessons
8. Writing Specifications
9. Audio-Visual Aids
10. Individual Counseling

FIRST CORE

July 20



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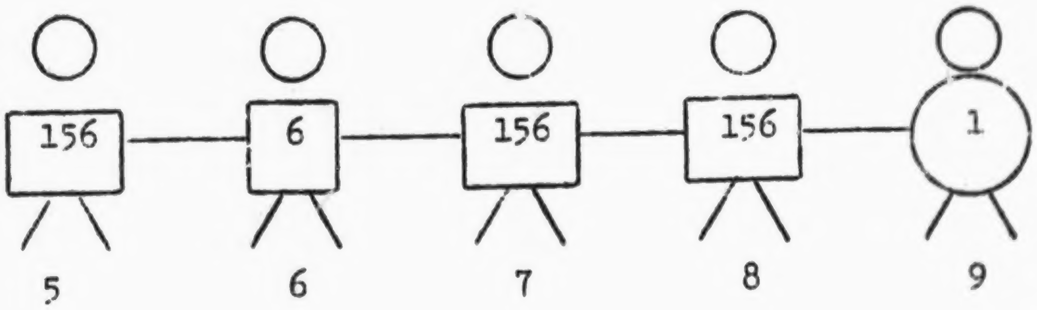
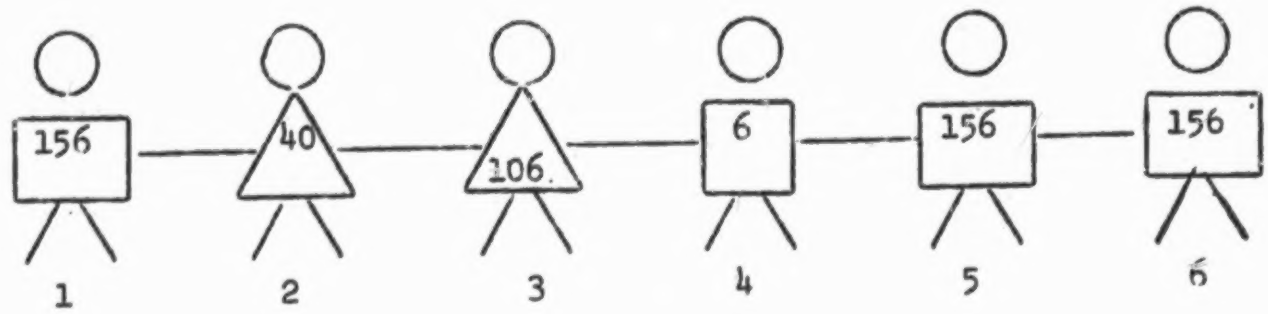


ACTIVITY:

1. Instructional Flow and Environmental Planning
2. Student One-hour Practice Lessons
3. Introduction to Programmed Learning
4. Individual Counseling
5. Instructional Flow and Environmental Control
6. Student One-hour Practice Lessons
7. Control of Cheating
8. Record Systems
9. Individual Counseling

FIRST CORE July 27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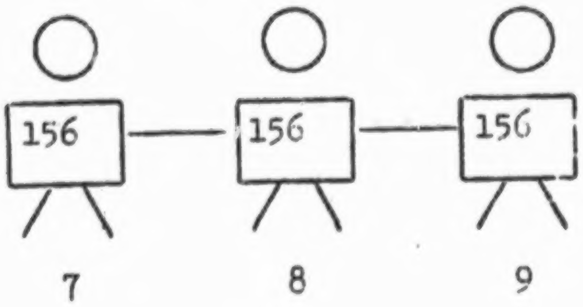
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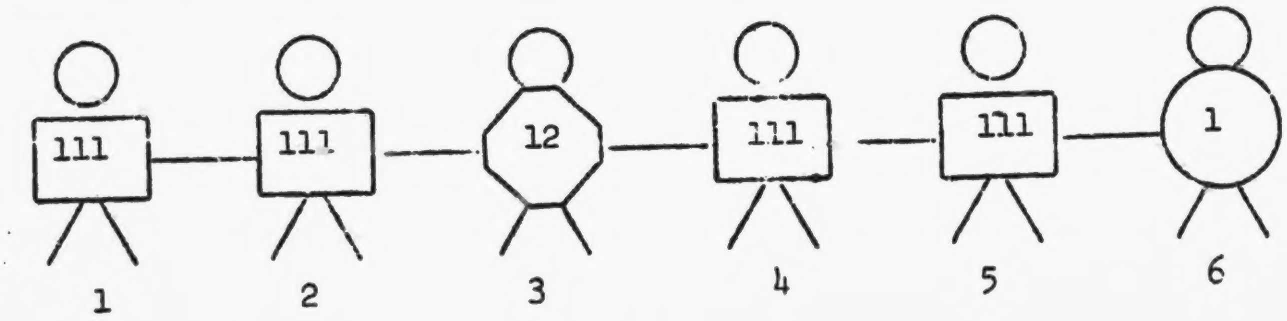
ACTIVITY:

1. Seven Keys to Success
2. Instructional Problems in Correctional Institutions (Correctional Teachers)
3. Student Recruitment (Public School Teachers)
4. Student One-hour Practice Lessons
5. Professionalism
6. Review
7. Evaluation of Program by Students
8. Final Examination
9. Dinner Meeting and Speaker

SECOND CORE July 7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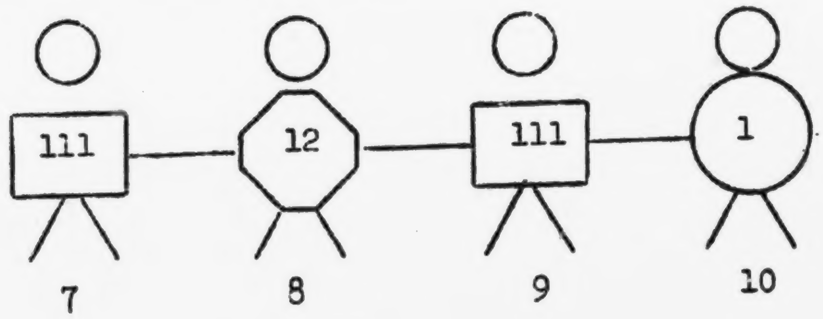
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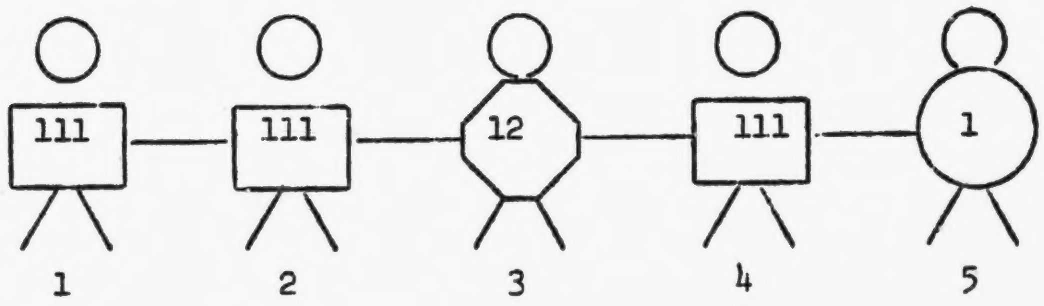
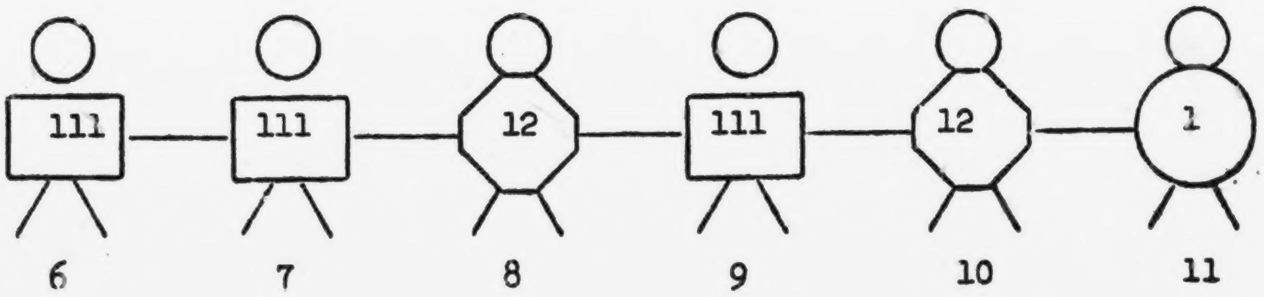
ACTIVITIES:

1. Developing Objectives in Curriculum Construction
2. Problems in Semantics
3. News Release Activity
4. Critique - News Release
5. The Role of the School in a Society
6. Individual Counseling
7. Mid-Term
8. Teachers Responsibility in a Democracy
9. Professional Ethics
10. Individual Counseling

SECOND CORE **July 14**



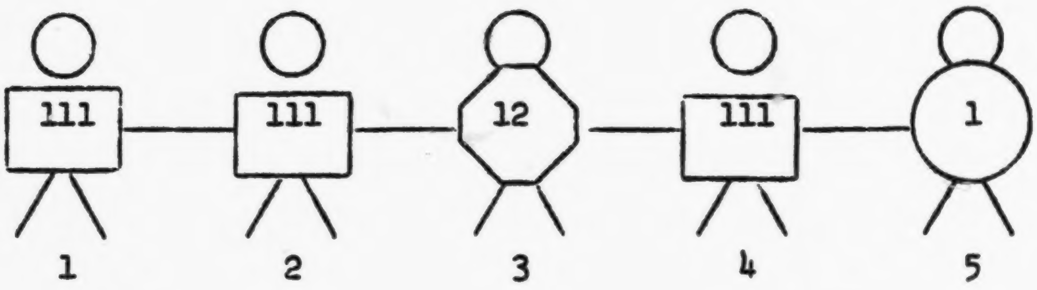
July 16



ACTIVITIES:

1. Substantive Areas of Vocational Education
2. Trends and Implications of Teacher Scheduling
3. The Quarter System Curriculum Development
4. Emerging Principles in Vocational Education
5. Individual Counseling
6. Substantive Areas Continued
7. Coordinating Vocational Curriculum with Other Subjects
8. Implementing A Student Selection System
9. Factors Influencing Vocational Curriculum
10. Task Force Activity
11. Individual Counseling

SECOND CORE July 21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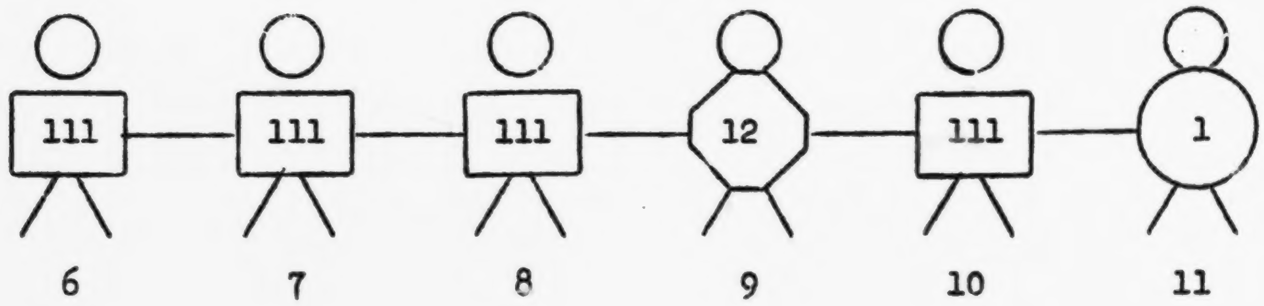
July 23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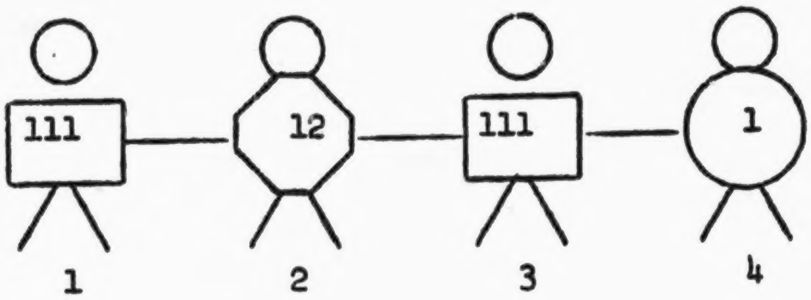
ACTIVITIES:

1. Service Areas in Vocational Education
2. Your Public Relations
3. Public Relations Calendar
4. Federal Aid Versus Federal Control
5. Individual Counseling
6. Teacher Effectiveness
7. A Plan for Self Direction
8. Job Application Psychology
9. Task Force - Plans for Presentation
10. Curriculum Process and Product
11. Individual Counseling

SECOND CORE

July 28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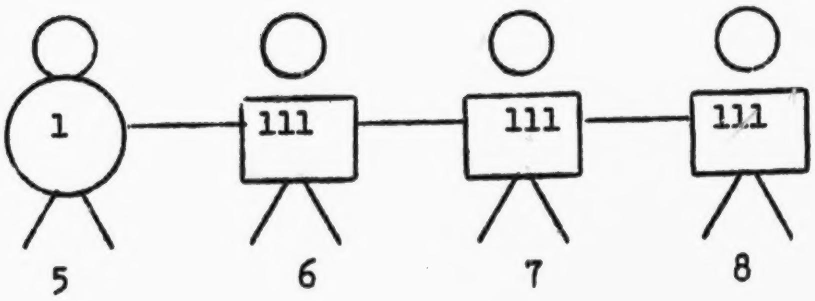
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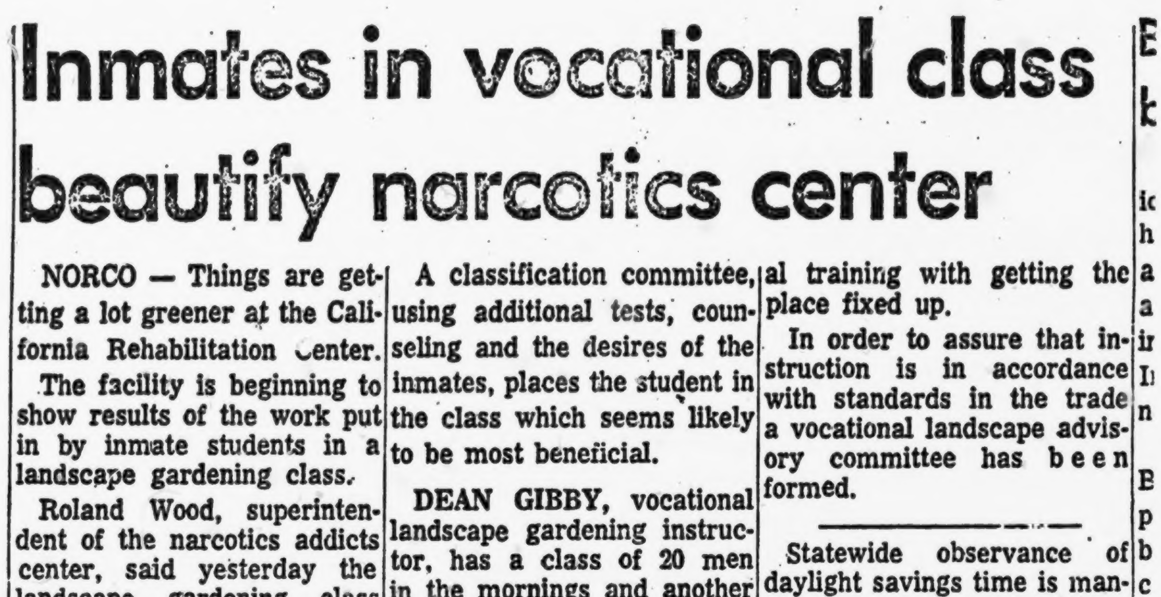
ACTIVITIES:

1. Re-direction and Implications for Vocational Education
2. Task Force Activity
3. Task Force Presentations
4. Individual Counseling
5. Program Counseling
6. Critique of the Program
7. Final Examination
8. Dinner Meeting and Speaker

Thursday, July 16, 1964 THE PRESS



Inmates in vocational class beautify narcotics center

NORCO — Things are getting a lot greener at the California Rehabilitation Center.

The facility is beginning to show results of the work put in by inmate students in a landscape gardening class.

Roland Wood, superintendent of the narcotics addicts center, said yesterday the landscape gardening class is an important segment of the educational and self-improvement program aimed at returning the addict to community life at a higher level than he had previously achieved.

THE rehabilitation center was set up as a pilot program for attempting to treat narcotics addiction as a medical rather than criminal problem. The first inmates began to arrive early last year. At present there are about 1,200 male and 300 female inmates there.

The center's vocational program is open to residents who attain a grade - point level of 8.5 or better on the California achievement tests. Students falling below this grade level are encouraged to enroll in academic classes.

A classification committee, using additional tests, counseling and the desires of the inmates, places the student in the class which seems likely to be most beneficial.

DEAN GIBBY, vocational landscape gardening instructor, has a class of 20 men in the mornings and another of the same size in the afternoons.

Students have been learning the fundamentals of planting lawns, trees, shrubs and flowers. At the same time they have found there is an art to the proper handling of rakes and shovels fully as important in the final results as a landscape architect's plans.

These vocational classes have begun to beautify the barracks areas and other points on the CRC grounds. According to Wood, lawns have been put in between the barracks, the front entrance has also been planted with grass and lawns, shrubs and trees have appeared around the chapel.

WOOD SAID this is an ideal way of combining vocational training with getting the place fixed up.

In order to assure that instruction is in accordance with standards in the trade a vocational landscape advisory committee has been formed.

Statewide observance of daylight savings time is mandatory in 16 states, 13 others permit local option on the issue, and 21 states do not observe it.

- ART SUPPLIES
- OFFICE SUPPLIES
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- GIFT ITEMS

CA

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Newspaper Release Developed During Second Core

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VT 004 350

Suggested Guidelines for Developing a Training Program for the Nursing Unit Management Assistant (Ward Clerk).

Office of Education (DHEW), Washington, D.C. Div. of Vocational and Technical Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 19Jul63 9p.

*PROGRAM DEVELOPMENT; *WARD CLERKS; *HEALTH OCCUPATIONS EDUCATION; CURRICULUM; EDUCATIONAL QUALIFICATIONS; OCCUPATIONAL INFORMATION; EMPLOYMENT QUALIFICATIONS; GUIDELINES

The assistant functions under the direction of the individual responsible for unit management who may or may not be a professional nurse. Specific activities include checking supplies, making appointments for patients, handling records and forms, assisting visitors, and maintaining intra- and inter-unit communications. Qualifications should include a high school education or its equivalent and a good background in English. Curriculum objectives should be to develop an understanding of the particular organizational relations, the necessary management skills, the knowledge and skills to assist in maintaining an effective communications system, and the understanding of the importance of safety and the role of the assistant in maintaining a safe environment. Curriculum components should include ethics, legal aspects, human relationships, principles from the related sciences, records and forms, and management skills. While a registered nurse with a baccalaureate degree should coordinate the program and assume teaching responsibility, experts in the fields involved may be utilized. Other aspects to be considered are physical facilities and advisory committee representation. (JK)

VT004350

ED033 237

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C.1

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Office of Education
Bureau of Adult and Vocational Education
Division of Vocational and Technical Education
Washington, D.C. 20202

For Administrative Use
July 19, 1963

SUGGESTED GUIDELINES FOR DEVELOPING A TRAINING PROGRAM FOR THE NURSING UNIT MANAGEMENT ASSISTANT*
(Ward Clerk)

I. NEED FOR PROGRAMS

With each passing year, the nursing profession comes closer to identifying the body of activity that is specifically nursing and separating from that those groups of functions which rightfully belong to other workers.

Some that have been successfully identified by the profession and relinquished by head nurses in hospitals are the housekeeping duties, including responsibility for cleaning patients' units; the dietary duties, including the actual serving of diets and the removal of trays; and in many hospitals, particularly those in urban centers, the preparation and distribution of pharmaceuticals. Nurses who have been forced to assume housekeeping, dietary, and pharmaceutical duties, in addition to their own, have done so at the expense of nursing the patient. When the burdens placed upon the nurse became too great, something had to be sacrificed; invariable, it was the nursing care of patients.

In the last ten years, the profession has made periodic attempts to sort the unit or ward management duties from the nurses' functions. These routine but time-consuming duties are now performed by the nursing unit management assistant, also designated as the "ward clerk." Almost every hospital could further relieve its nurses of non-nursing functions by carefully studying the daily round-the-clock activities in each nursing unit. Although technical in nature, these functions may be performed satisfactorily by persons without nursing preparation. Many hospitals have found that there is a natural grouping of management activities which may be performed by an individual prepared in a comparatively short but organized training program. The correct use of the nursing unit management assistant frees the head nurse to plan for the comprehensive nursing care of all patients on the ward or unit, to supervise nursing care whenever necessary, to teach staff, and to participate in the nursing care of patients in selected

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*Prepared by the Health Occupations Unit

Personal

It is essential that the nursing unit management assistant present a good appearance. She should be neat, clean, have a pleasing and gracious manner, and be diplomatic in contacts with patients, visitors, and co-workers. The nursing unit management assistant should be mature and capable of establishing satisfactory interpersonal relationships with professionals, semi-professionals, and auxiliary workers. She must be alert, have the ability to remember names and people, be able to keep many details in mind, and have exceptional observational skills. The latter may be developed to some degree through training.

IV. THE EDUCATIONAL PROGRAM

The educational program should be directed toward the development of managerial skills. The program should prepare individuals to respect the dignity and rights of human beings. It should require acceptance of a strict code which embraces high standards of conduct and respect for the confidential nature of all information pertaining to patients, their friends, relatives, and co-workers.

The major portion of the instruction should take place in selected nursing units in the hospital and cover broadly the functions identified for the worker.. Related instruction should be given concurrently in classrooms located on or as close to the nursing unit as possible. Due to previous experience with similar educational programs, this Office suggests a maximum educational week of thirty hours. The educational program should seek to develop:

- o Understanding of the organizational relations within the hospital and nursing units
- o Managerial skills needed to assist in implementation of work plan for nursing unit
- o Knowledge and skills to assist in establishing and maintaining the communications system necessary for a nursing unit
- o Understanding of the importance of safety and the role of the nursing unit management assistant in maintaining a safe working environment

Minimum Curriculum Should Include:

- o Ethics
- o Legal aspects
- o Human relationships, normal and abnormal behavior
- o Related Sciences, principles from
  - Bacteriology
  - Medical Asepsis
  - Personal health and hygiene
- o Medical and nursing records and forms
- o Management Skills
  - Control of records and forms
  - Maintenance of a safe enviornment
  - Establishment of effective communications
  - Implementation of work plans or assignment schedule for the unit
  - Proposals for work simplification
  - Maintenance of equipment and supplies through proper care and storage, sufficient ordering, and prompt repairs
  - Assisting with the admission and discharge of patients
  - Supervision of visiting periods

The length of the educational program would be determined by the objectives, content, and the standards for admission. Only the superior or above-average person could be properly prepared to function as a nursing unit management assistant in 16 weeks.

V. STAFF

The teacher-coordinator in the program should be a registered professional nurse who has had experience in ward management, preferably as a head nurse. In implementing the curriculum plan, the talents of experts in communications, management, psychology, law and other related areas may be utilized wherever necessary and at the discretion of the faculty.

Whenever possible, all teachers should have a baccalaureate degree. In addition to meeting the minimum requirements for certification, as set forth in the State Plan, teachers will be expected to enroll in pre-service or in-service teacher training courses in the philosophy, principles, methods of teaching, and other appropriate vocational education courses.

VI. OTHER CONSIDERATIONS

Minimum Physical Facilities

Standard Classroom or Conference Style Room

Standard equipment

Supplies should include samples of all types of forms, such as multiple medical record requisition, and repair forms.

Suggested Representation on Nursing Unit Management Assistants Advisory Committee:

Employed nursing unit management assistants

Registered professional nurses

Hospital administrators

Guidance counselors in secondary schools

Counselors, representative of fraternal, civic, religious, and other community groups

VII. SUGGESTED REFERENCES AND OTHER SOURCES OF ASSISTANCE

Publications

"The Sextant Series for Exploring Your Future in Hospitals" Milwaukee: The American Liberty Press, 1961, P. 74

"Ward Clerks' Duties," Hospitals, April 16, 1956, P. 24

"Opinions and Ideals"Classes for Clerical Aides Improve Job Performance," Hospitals, October 1, 1961, Volume XXXV.

Ward Administration, Margaret Randall, Pennsylvania: W. B. Sanunders Company, P. 306.

"Patterns of Patient Care"; Some studies of the Utilization of Nursing Service Personnel, Frances L. George and Ruth P. Kuehn. New York; The McMillan Company, 1955, P. 266

Civil Service Commission

"Health Careers Guidebook," New York: The National Health Council, 1958, P. 110

Professional Agencies

American Nurses Association
10 Columbus Circle
New York 19, New York

American Hospital Association
840 N. Lake Shore Drive
Chicago, 11, Illinois

VT 004 840
Learning Outcomes of the Educational Program Pertaining to Farmer Cooperatives in High School Departments of Vocational Agriculture in Virginia. Bulletin No. 575.

Virginia Agricultural Experiment Station, Blacksburg
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 66 43p.

*LEARNING; *VOCATIONAL AGRICULTURE; *FARMERS; *HIGH SCHOOL STUDENTS; PROGRAM EFFECTIVENESS; UNITS OF STUDY (SUBJECT FIELDS); EDUCATIONAL PROGRAMS; *COOPERATIVES
VIRGINIA

The purposes of the study were to determine (1) what learning outcomes should result from vocational agriculture instruction on farmer cooperatives, (2) topics on which farmers need and want information, (3) the learning of outcomes of the farmer cooperative educational program in Virginia in 1964-65, and (4) scope and characteristics which indicate the effectiveness of the instructional program. Using various data-gathering instruments pertaining to farmer cooperatives, the study had the following results: (1) When a list of 47 learning outcomes, chosen by a panel of experts, was submitted to 228 farmers enrolled in 19 schools, a majority of the farmers had acquired information about 76.5 percent of them, (2) From a possible list of 33 topics, a majority of the 144 young farmers questioned expressed a need and desire to study only 32 at some time, (3) On a test administered to 486 high school vocational agriculture students in 57 schools, 69 percent of the test questions were answered correctly, and (4) Of 200 teachers, representing 74 percent of the states teachers, who completed a questionnaire to supply information on instructional programs, nearly two-thirds taught cooperatives in conjunction with other subjects and one-fourth as a separate unit. (DM)

VT004840

ED033237

Learning Outcomes of the Educational Program

pertaining to farmer cooperatives in high school departments of vocational agriculture in virginia

agricultural experiment station
virginia polytechnic institute
blacksburg, virginia

bulletin 575

VT004840

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DECEMBER, 1966

FOREWORD

Appreciation is expressed to Coyt T. Wilson, Director, Agricultural and Life Sciences Research; R. W. Beamer, Head, Department of Education; C. E. Richard, Associate Professor, Agricultural Education, and J. D. Oliver, Assistant Professor, Agricultural Economics, who served as consultants and made helpful suggestions for designing and making the study and preparing the report; to J. M. Campbell, State Supervisor of Vocational Agriculture, and the area supervisors of vocational agriculture for sponsoring the study; to Clyde Kramer, Professor, Statistics, for advice and assistance. Also to those who served on the panel of experts--Emmett Buckles, Manager, Russell County Cooperative, Lebanon, Virginia; R. Lee Chambliss, Associate Professor, Agricultural Economics, Virginia Polytechnic Institute; John H. East, President, the Augusta Cooperative Farm Bureau, Staunton, Virginia; Julian A. Everly, Manager, the Federal Land Bank Association and the Production Credit Association, Winchester, Virginia; Orville B. Helton, Branch Plant Manager, Cooperative Fertilizer Service, Bristol, Virginia; D. Upton Livermore, Professor, Agricultural Economics, Virginia Polytechnic Institute; Anderson Grant Moffett, Assistant Director, Market Development, Virginia Department of Agricultural, Richmond; and Edward B. Tucker, Manager, Southside Cooperative Milk Producers Association, Blackstone, Virginia.

Special thanks are extended to teachers of vocational agriculture, high school students, and farmers whose participation made this study possible.

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SUMMARY

The data-gathering instruments, all of which pertained to farmer cooperatives, consisted of: (1) a list of 100 possible learning outcomes for consideration by the panel of experts, (2) a list of 33 topics (subunits) on which each of 144 farmers checked those about which they needed and wanted information, (3) a test administered to 486 high school students, (4) a schedule (checklist) on which each of 228 farmers indicated the extent to which he had mastered 47 learning outcomes, and (5) a teacher's questionnaire which was completed by 200 vocational agriculture teachers.

Learning Outcomes Identified by the Panel of Experts

At least 3/4 (6 of the 8 experts) identified 83 learning outcomes. The panel was unanimous in selection of 47 learning outcomes. "Classroom discussion led by the teacher" was most often suggested as the way to accomplish learning outcomes.

Topics About Which Farmers Needed and Wanted Information

A majority of the 144 farmers expressed a need and desire to study during the current year only 2 of the 33 topics (subunits) considered. Systematic instruction in vocational agriculture, including topics for study in farmers' classes, is usually planned a year in advance. This probably influenced farmers not to express a desire to study topics during the current year, for which no prior planning had been done. This is strongly indicated by the fact that a majority (in most instances a large majority) expressed a need and desire to study 32 of the 33 topics either during the current year or later. The only topic that a majority did not want to study either during the current year or later was "outstanding men who promoted cooperatives", but 47.9% did want to study this topic at some time.

Test Administered to High School Students

The advanced students enrolled in vocational agriculture classes answered an average of 69% of the test questions correctly. As expected, they were much better informed about some aspects of farmer cooperatives than others. For example, 90.3% knew the intent of a farmer cooperative, operating as a non-profit organization, is to operate so that services will be available to users at the lowest possible cost consistent with sound business practices. However, only 36.6% knew that the hired manager of a cooperative, and sometimes other key employees, are employed by the board of directors, not by the members.

Objectives

The objectives of this study were:

1. To have a panel of experts determine what desirable learning outcomes should result from a reasonably effective educational program on farmer cooperatives for young people and adults enrolled in vocational agriculture classes, and suggest ways of achieving such outcomes.
2. To determine the topics (subunits of instruction) pertaining to farmer cooperatives about which farmers need and want information.
3. To determine and analyze learning outcomes of the educational program on farmer cooperatives conducted in high school departments of vocational agriculture in Virginia during 1964-65.
4. To determine the scope and some other characteristics indicating effectiveness of the instructional program on farmer cooperatives provided by vocational agriculture teachers.

Procedure

As a basis for determining the learning outcomes that should result from a reasonably effective educational program on farmer cooperatives, a list of 100 possible learning outcomes was prepared from available literature and submitted to a panel of 8 experts. Their decisions are summarized later in this report.

Information was solicited from individuals in a systematic sample of farmers enrolled in young farmer classes. Each was asked to indicate whether he needed and wanted to study each of 33 topics (subunits) pertaining to farmer cooperatives: (1) during the current year (1965-66), (2) at a later time, or (3) not at any time. Data for this phase of the study were provided by 144 farmers throughout the state.

To determine the learning outcomes of the educational program on farmer cooperatives conducted in high school departments of vocational agriculture, 2 courses of action were taken:

1. A test was prepared, pretested, and administered to 486 high school students enrolled in vocational agriculture in 57 schools throughout the state. This test consisted of 33 questions designed to determine the students' general knowledge of farmer cooperatives.
2. A copy of a schedule (checklist) containing certain learning outcomes was filled in by each of 228 farmers enrolled at 19 schools. This schedule contained the 47 learning outcomes that were unanimously identified by the panel of experts as those that should result from a reasonably effective educational program on farmer cooperatives for young people and adults enrolled in vocational agriculture classes. These data were punched on IBM cards and analyzed at the V.P.I. Computing Center.

All vocational agriculture teachers (except first-year teachers) were urged, in a letter from the State Supervisor of Vocational Agriculture, to supply information about certain aspects of their instructional program on farmer cooperatives and the kinds of teaching materials they needed in this area. Approximately a month later a follow-up letter was sent to each teacher who had not responded. A teacher's questionnaire on which to supply the information requested was sent with each letter. The form was completed and returned by 74% of the teachers.

WHAT LEARNING OUTCOMES SHOULD RESULT?

As a basis for determining the learning outcomes that should result from a reasonably effective educational program on farmer cooperatives, a list of 100 possible learning outcomes was prepared from available literature, mainly from Cooperatives: Today and Tomorrow[3]. The 8 members of the panel of experts[4] carefully examined each of these and at least 3/4 thought that 83 of the 100 should result from a reasonably effective educational program. The panel was unanimous in its selection of 47.

The 83 learning outcomes identified by at least 3/4 of the experts are listed below, together with one or more ways by which the panel believed each should be accomplished.

Learning Outcomes	Suggested Ways of Accomplishing**
1. Be able to define a cooperative.*	1
2. Know that a cooperative is a particular form of private business.*	1
3. Know that the members (as owners and users) of a cooperative serve themselves.	1
Be able to compare the existing economic systems according to:	
4. Ownership of property.	1 and 2
5. Initiation of enterprise.	1 and 2
6. Economic incentives.	1 and 2
7. Pricing mechanism.	1 and 2

---

[3] Cooperatives: Today and Tomorrow, Ewell Paul Roy. The Interstate Printers and Publishers, Danville, Illinois. 1964. 590 pp.

[4] The name, title, and brief summary of qualifications of each person on the panel appears in Appendix A.

* Each of the 47 learning outcomes unanimously identified is followed by an asterisk.

** The code used in the column headed "Suggested Ways of Accomplishing" is:

1 = Classroom discussion led by the teacher.
2 = Meeting with a resource person.
3 = Visiting cooperative.
4 = Reading assignment.

	Learning Outcomes	Suggested Ways of Accomplishing**
8.	Know that a farmer cooperative is composed of farmers who voluntarily associate themselves for a common purpose, usually to perform some needed business service to themselves at cost.*	1, 2, or 3
	Be able to answer each of the following questions about operating a farmer cooperative in Virginia:	
9.	To whom are the goods and services rendered?	1 or 2
10.	How is a cooperative started?	1 or 2
11.	How does a cooperative become legal?	1 or 2
12.	Where is a cooperative business chartered?	1 or 2
13.	How does one become a member of a cooperative?	1 or 2
14.	Who controls the firm, selects the manager, and makes policy decisions?*	1 or 2
15.	How is the voting done?*	1 or 2
16.	Who owns the business?*	1 or 2
17.	What do the owners put into the business?*	1 or 2
18.	What is the maximum return (dividend on capital stock) that can be received on money invested in a cooperative in Virginia?*	1 or 2
19.	How may net earnings be used?*	1 or 2
20.	What is the extent of liability of each of the owners?*	1 or 2
21.	How may the business be ended?*	1 or 2
22.	How are net earnings taxed?*	1 or 2

---

* Each of the 47 learning outcomes unanimously identified is followed by an asterisk.

** The code used in the column headed "Suggested Ways of Accomplishing" is:

1 = Classroom discussion led by the teacher.
2 = Meeting with a resource person.
3 = Visiting cooperative.
4 = Reading assignment.

	Learning Outcomes	Suggested Ways of Accomplishing**
23.	Know that in contrast to the profit-type corporation, the cooperative serves only as an agent for its members.	1 or 2
24.	Know at least 4 developmental trends noticeable since World War II.	1 or 2
25.	Know the relative scope of agricultural producer, consumer, business and industrial, and workers' cooperatives in the United States.	1, 2, 3, or 4
26.	Be able to name at least 5 types of agricultural cooperatives.	1, 3, or 4
	Know, in a general way, the nature and scope (in the United States) of:	
27.	Business service cooperatives (nonfarm).	1, 3, or 4
28.	Nonfarm manufacturing, marketing, and supply associations.	1, 3, or 4
29.	Retailer-owned wholesale cooperatives.	1, 3, or 4
30.	Workers' productive cooperatives.	1, 3, or 4
31.	Quasi cooperatives.	1, 3, or 4
	Know some of the strengths and weaknesses of the listed Rochdale principles of operating a cooperative:	
32.	Open membership.*	1 or 2
33.	One man, one vote.*	1 or 2
34.	Cash trading.*	1 or 2
35.	Membership education.*	1 or 2
36.	Political and religious neutrality.*	1 or 2
37.	No unusual risk assumption.*	1 or 2
38.	Limited interest on stock.*	1 or 2

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* Each of the 47 learning outcomes unanimously identified is followed by an asterisk.

** The code used in the column headed "Suggested Ways of Accomplishing" is:

1 = Classroom discussion led by the teacher.
2 = Meeting with a resource person.
3 = Visiting cooperative.
4 = Reading assignment.

	Learning Outcomes	Suggested Ways of Accomplishing**
39.	Goods sold at regular retail prices.*	1 or 2
40.	Net margins (profits) distributed according to patronage.*	1 or 2
41.	Have a general knowledge of federal legislation affecting cooperatives.*	1 or 2
42.	Know that a cooperative pays sales taxes, payroll taxes, franchise taxes, gasoline taxes, public service taxes, real and personal property taxes, and Social Security taxes.*	1 or 2
43.	Know that a cooperative is not required to pay income taxes when the income, above expenses, is distributed to members who are subject to income taxes.*	1 or 2
44.	Know that in order to operate in Virginia a cooperative should, in most cases, be incorporated.	1 or 2
45.	Know the gist of the Virginia law which states that any number of persons, not fewer than 5, may form a corporation with or without capital stock, for the purpose of conducting any agricultural, dairy, mercantile, merchandise, brokerage, manufacturing, or mechanical business on the cooperative plan.	1 and 4
	Know that the steps in organizing a cooperative consist of:	
46.	Establishing a need for it.*	1 or 2
47.	Drafting articles of incorporation and becoming incorporated.*	1 or 2
48.	Drawing up by-laws and membership agreement.*	1 or 2
49.	Electing directors.*	1 or 2
50.	Appointing a manager.*	1 or 2
51.	Developing policies.*	1 or 2
52.	Adopting operating plans.*	1 or 2
53.	Arranging for financing.*	1 or 2

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3 = Visiting cooperative.
4 = Reading assignment.

	Learning Outcomes	Suggested Ways of Accomplishing**
54.	Know that a cooperative cannot always return the highest price for products nor furnish supplies and services at the lowest cost.*	1, 2, or 3
55.	Know that there are other economic limitations.*	1 or 2
56.	Know that a cooperative can make savings only when it brings about economies, eliminates unnecessary services, and operates efficiently.*	1, 2, or 3
57.	Know that members help reduce operating costs by patronizing their cooperatives.*	1, 2, or 3
58.	Know that the structure of cooperatives may consist of: (a) independent local units, (b) co-op regional federations (c) centralized regional cooperatives, and (d) combinations of (b) and (c).*	1 or 3
59.	Know some of the principles for financing a cooperative. Example: "If capital is subscribed in proportion to patronage, there will be less need to pay interest on capital."	1, 2, or 3
60.	Know the difference between equity and non-equity capital.*	1 or 3
61.	Know that equity capital in a cooperative is that capital supplied by owners as the basic investment to make the endeavor possible.*	1 or 3
62.	Know that the source of equity capital in a farmer cooperative may include patronage credits, common stock, and preferred stock.	1
63.	Know the essential elements of the revolving fund plan of financing a business.	1 or 2
64.	Know that membership of a cooperative should subscribe initially at least 50% of the fixed capital required and should provide all the operating capital needed by the cooperative at its lowest point of volume.	1, 2, or 3

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4 = Reading assignment.

Learning Outcomes	Suggested Ways of Accomplishing**
65. Know that if it meets the eligibility requirements for such borrowing, a cooperative may borrow capital from certain government agencies, commercial banks, or other credit firms.	1, 2, or 3
66. Know that, in order to be eligible to borrow capital, a cooperative usually must present evidence of the economic need for the cooperative as well as detailed information relative to its operation.	1, 2, or 3
67. Know that a cooperative that is unable to operate on a cash basis should attempt to shift credit extension to credit agencies, and should extend credit to its patrons only as a last resort.	1 or 2
68. Know at least 5 of the powers of the members of a cooperative.*	1
69. Know at least 5 of the responsibilities of members of a cooperative.*	1
70. Have a general knowledge of the powers and responsibilities of members of the cooperative's board of directors.*	1 or 2
71. Know some qualifications that a good manager of a cooperative should possess.*	1 or 2
72. Know that, in a cooperative, the jobs of management include planning, organizing, directing, coordinating, and controlling.*	1 or 2
73. Know that studies have revealed that active members of a cooperative are likely to be well-informed about their cooperative and satisfied with it.	1 and 2
74. Know that the primary purpose of an annual meeting of the members of a cooperative is not recreation but to provide information and to determine broad policy.*	1 and 2
75. Know several conditions which cause cooperatives to fail.*	1 and 2

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* Each of the 47 learning outcomes unanimously identified is followed by an asterisk.

** The code used in the column headed "Suggested Ways of Accomplishing" is:

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2 = Meeting with a resource person.
3 = Visiting cooperative.
4 = Reading assignment.

Learning Outcomes	Suggested Ways of Accomplishing**
76. Know that managing a cooperative is more difficult than managing a profit-type corporation of the same magnitude, and often pays less.*	1, 2, and 3
77. Recognize that each individual should be concerned about legislation and government policy, and that he can be more effectively represented by an organization than as an individual.	1 and 2
78. Recognize that changes are taking place in agriculture, and that farmers must learn about such changes and adapt in order to survive.	1 and 2
79. Know that a well-managed cooperative offers: (a) an opportunity for all people to help themselves by cooperating with others; and (b) development and strength to the individual citizen in acquiring and controlling private property, yet preserves individual freedom, dignity, and responsibility.	1
80. Know how to dissolve a cooperative when it ceases to do business.	1 and 2
81. Know that in order for any kind of farmer cooperative (marketing, supply, and/or service) to retain its charter under Virginia law, at least 50% of its business must be done with members (not more than 50% with non-members).	1 and 4
82. Know that in order for a marketing cooperative to be exempt from federal taxes, it must handle (market) only what it gets from members or from other marketing cooperatives.	1
83. Know that in order for a supply cooperative to be exempt from federal taxes, at least 85% of its business must be done with farmers (not more than 15% with non-farmers).	1

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** The code used in the column headed "Suggested Ways of Accomplishing" is:

1 = Classroom discussion led by the teacher.
2 = Meeting with a resource person.
3 = Visiting cooperative.
4 = Reading assignment.

Summary

At least 3/4 of the panel of experts identified 83 of the 100 learning outcomes. The panel was unanimous in its selection of 47.

"Classroom discussion led by the teacher" was most often suggested as the way to accomplish the learning outcomes.

	Farmers who expressed need and desire to study topic:		Farmers who felt no need to study topic at any time	Farmers who did not respond
Topic	During current year	At a later time		
15. Legal requirements for a cooperative organization.	41.67%	43.75%	11.11%	3.47%
16. Financing and operating a cooperative	41.67%	43.06%	11.80%	3.47%
17. Basic beliefs about cooperatives	31.25%	49.31%	15.97%	3.47%
18. Policies and operating procedures of local farmer cooperatives	49.31%	36.80%	11.11%	2.78%
19,20. Services rendered by local cooperatives to:				
a. Member	53.47%	34.03%	8.33%	4.17%
b. Non-members	40.97%	40.28%	13.19%	5.56%
21,22. Financial statements of the kind and value of transactions made by local cooperatives:				
a. For the previous year	32.64%	40.97%	21.53%	4.86%
b. For the previous 5 years	22.92%	50.70%	19.44%	6.94%
23. Membership requirements in effect for each local cooperative in which farmers may participate.	38.20%	45.14%	13.19%	3.47%
24. Responsibilities of members of a cooperative	40.28%	36.81%	11.11%	11.80%
25. Kinds of taxes cooperatives pay	48.61%	35.42%	13.19%	2.78%
26. Kinds of taxes cooperatives do not pay	42.36%	36.11%	18.75%	2.78%
27. Steps usually carried out in organizing a cooperative	31.25%	56.25%	11.11%	1.39%
28. Possible advantages and costs of becoming a member of a cooperative	44.44%	29.86%	4.17%	21.53%
29. Qualifications of members of a cooperative	45.14%	41.67%	11.11%	2.08%

Topic	Farmers who expressed need and desire to study topic: During current year	At a later time	Farmers who felt no need to study topic at any time	Farmers who did not respond
30. Powers and responsibilities of members of the board of directors of a cooperative	38.89%	49.31%	9.72%	2.08%
31. Qualifications of members of the board of directors of a cooperative	38.20%	45.83%	13.19%	2.78%
32. The powers and responsibilities of the manager of a cooperative.	37.50%	45.14%	14.58%	2.78%
33. Qualifications of the manager of a cooperative	38.89%	46.53%	13.88%	0.70%

Summary

A majority of the farmers who participated in this study expressed a need and desire to study, during the current year, only 2 of the 33 topics considered. These were: (1) scope of organized cooperatives in the local community (52.7%), and (2) services rendered by cooperatives to members (53.4%). However, it is noteworthy that more than 2/5 expressed a need and desire to study 16 of the 33 topics during the current year.

Carefully planned instruction in vocational agriculture, including topics for study by farmers' classes, is usually planned a year in advance for each class. This probably influenced farmers not to express a desire to study topics during the current year, for which no prior planning had been done. This is strongly indicated by the fact that a majority (in most instances a large majority) expressed a need and desire to study 32 of the 33 topics either during the current year or later. The only topic that a majority did not want to study either during the current year or later was "outstanding men who promoted cooperactives", but 47.9% did want to study this topic at some time.

The findings were interpreted to mean that a majority of the farmers enrolled in vocational agriculture classes in Virginia feel the need and desire for information pertaining to most aspects of cooperatives and especially desire information about the "scope of local cooperatives" and "services rendered by cooperatives to members."

The findings imply that vocational agriculture teachers should consider including in their programs of instruction for farmers more units dealing with farmer cooperatives than were included during the 1965-66 school year.

LEARNING OUTCOMES OF THE EDUCATIONAL PROGRAM

Many Virginia vocational agriculture teachers have provided instruction on farmer cooperatives in past years. They have also encouraged their students to engage in cooperative activities. Information relative to the extent of such instruction and participation had not been compiled and the learning outcomes had not been determined.

The third objective of this study was to determine and analyze the learning outcomes of this educational program. The study was limited to the program conducted in high school departments of vocational agriculture. These 2 procedures were used:

1. A test was administered to 486 advanced high school students, and

2. Data were collected from 228 farmers on a schedule (checklist).

Extent to Which High School Students Had Learned

The test administered to high school students consisted of 33 questions designed to determine their general knowledge about farmer cooperatives. Test questions were taken from a resource unit prepared for the Maryland Council of Farmer Cooperatives by an agricultural economist and an agricultural education specialist at the University of Maryland.[5] Only students in the third and fourth years were asked to take the test voluntarily administered by teachers in 56 schools throughout Virginia.

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[5] "Resource Unit For Teaching Cooperation," Robert J. Beiter and Clodus R. Smith, Department of Agricultural and Extension Education, University of Maryland, College Park, Maryland. 1964. 21 pp.

The responses of the high school students are summarized in Table 1.

Table 1. Summary of Responses of 486 High School Vocational Agriculture Students to Statements About Farmer Cooperatives

Statement	Correct answer	Students giving correct answer	
		Number	%
(Note: Students were instructed to mark each statement "True" or False".)			
1. A farmer cooperative is a particular form of private business, rather than an organization or agency of the federal or state government .	True	330	67.9
2. A farmer cooperative is composed of farmers who voluntarily associate themselves for a common purpose, usually to perform some needed business service to themselves at cost	True	425	87.4
3. Objectives of farmer cooperatives in the United States are primarily business or economic, rather than social or political reform.	True	416	85.6
4. Members exercise control in a farmer cooperative in the same way, and on the same basis, as stockholders in General Motors control that organization	False	187	38.5
5. Farmers use cooperatives primarily to help themselves operate their own farms more efficiently and economically, rather than to help other farmers.	True	190	39.1
6. Most farmer cooperatives operate on the basis of one member-one vote	True	353	72.6
7. Farmer cooperatives are controlled by the members on the basis of amount of capital invested by each in his cooperative	False	214	44.0
8. When we speak of a farmer cooperative as being a non-profit organization, we mean that the intent is to operate the cooperative so that its services will be available to the users at the lowest possible cost consistent with sound business practices	True	439	90.3

Table 1. (Continued)

Statement	Correct answer	Students giving correct answer	
		Number	%
9. A business that fails to make a profit from selling fertilizer to farmers automatically becomes a farmer cooperative	False	369	75.9
10. A farmer cooperative, since it is organized by the people who use its services, will always be economically successful	False	275	56.6
11. A farm supply purchasing cooperative benefits the users of its services by exercising its control over the quality of the materials and services which it offers and by charging prices which are reasonable. Any charges made that are found, at the end of the year's operation, to be above actual costs are returned to the users, each getting a return in proportion to the business he did with the cooperative	True	404	83.1
12. A farmer's financial liability in a farmer cooperative is limited to the amount of money he invests in the form of subscriptions to capital stock or membership and any debts he owes the cooperative.	True	291	59.9
13. If a farm supply purchasing cooperative does $500,000 business in a given year, and has savings of $30,000 left after costs are met, it is divided equally among all those who used the cooperative that year	False	259	53.3
14. The directors of a farmer cooperative are elected by the members of the cooperative and are themselves members	True	432	88.9
15. Farmer cooperatives are the only businesses that may return savings to members	False	359	73.9
16. The directors of a cooperative are elected by the investors, those people that hold shares of preferred stock	False	229	47.1
17. In general, it is not good policy to permit a close relative of a director to become a manager, or key employee, of that cooperative .	True	309	63.6

Table 1. (Continued)

Statement	Correct answer	Students giving correct answer Number	%
18. The manager of a cooperative, and sometimes other key employees, are hired directly by the members of the cooperative	False	178	36.6
19. The ultimate control of any farmer cooperative is in the hands of the farmer members	True	403	82.9
20. In a farmer cooperative, the patronage refunds are convenient ways of adjusting tentative prices or charges to an actual cost basis at the end of an operating period, usually a year. One reason for this is that it is impossible to predict the exact cost of the service at the time service is rendered . . .	True	364	74.9
21. A farmer cooperative is not required to pay income taxes when the income, above expenses, is distributed as patronage refunds to members who are subject to income taxes	True	278	57.2
22. Farmer cooperatives are required by law to hold one meeting of the membership each year . . .	True	334	68.7
23. Most states have organized state associations or councils of cooperatives as an effective means of working together on educational, legislative, and public relations problems . .	True	393	80.9
24. A farmer must be a member to do business with a cooperative.	False	378	77.8
25. Each member is responsible for keeping informed about the services available, the annual report, and financial structure of his cooperative . .	True	414	85.2
26. One definition of patronage refund is: money returned to customers in proportion to their purchase, beyond the cost of doing business, in a cooperative	True	404	83.1
27. Cooperatives offer many good employment opportunities for young men and women with farm backgrounds	True	430	88.5
28. Farmers join and patronize cooperatives primarily to make more money	True	317	65.2

Table 1. (Continued)

Statement	Correct answer	Students giving correct answer	
		Number	%
29. In a cooperative, the benefits normally go to patrons in proportion to use	True	195	40.1
30. Farmer cooperatives have tended to stabilize farm prices through orderly marketing	True	286	58.8
31. Assume a cooperative and a nearby independent buyer have the same operating costs and sales prices. The chief reason the cooperative returns more to the farmers who use its services is that net earnings are returned to them	True	357	73.5
32. The most generally accepted cooperative "principles" are limited returns on capital, democratic control, and sharing savings in proportion to patronage	True	298	61.3
33. Some of the ways by which members can help strengthen their cooperative and make it more successful are: (1) by attending and taking part in membership meetings, (2) by offering constructive suggestions and criticisms, (3) by voting in the election of officers, (4) by understanding the purposes and objectives of the cooperative, and (5) by using the services of the cooperative.	True	399	82.1

Summary

An average of 69.2% of the test questions was answered correctly by the advanced vocational agriculture students. This and the information reported in Table 1 reveal these students had acquired much knowledge about farmer cooperatives. However, they were much better informed about certain aspects than others. These findings should be helpful to vocational agriculture teachers in determining aspects that should be most emphasized in such instruction.

Farmers' Knowledge About Cooperatives

Of the unanimously identified 47 learning outcomes, the extent to which the 228 participating farmers had acquired knowledge of each was:[6]

1. Four-fifths could define a cooperative.
2. Only 37.3% knew that a cooperative is a particular kind of private business.
3. Four-fifths had learned that a farmer cooperative is composed of farmers who voluntarily associate themselves for a common purpose, usually to perform some needed business service to themselves at cost.
4. Seven-tenths knew that a board of directors controls a cooperative, selects the manager, and makes policy decisions.
5. Only 2/5 had learned that voting in a cooperative is usually done according to one man-one vote, but is sometimes done according to patronage.
6. Seven-tenths knew that the business of a cooperative is owned by member patrons.
7. Three-fifths had learned that member contributions to a cooperative consist of doing business with the cooperative and, if they desire, putting in funds.
8. Only slightly more than 1/4 knew that the maximum return that can be received on money invested in a cooperative (dividend on capital stock) is limited to 6% by Virginia law.
9. Three-fifths had learned that a cooperative may use its net earnings by prorating them to patrons on a patronage basis.
10. Only 1/3 knew that a farmer's liability in connection with his membership in a cooperative is limited to the amount of money he invests in the cooperative plus any debts he owes it.
11. Three-fifths had learned that the business of a cooperative may be ended by bankruptcy or legal dissolution.

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[6] A similar but somewhat different list of learning outcomes was used for high school students than that used for farmers. As mentioned on page 18, the list used for high school students was prepared at the University of Maryland. After the phase of the study was launched in which the high school students participated, the panel unanimously identified 47 learning outcomes that should result from a reasonably effective educational program pertaining to farmer cooperatives. These were used for the phase of the study in which farmers supplied the data.

12. Nine-tenths knew at least one way that net earnings of a cooperative are taxed.

13. Three-fourths identified 4 or more kinds of taxes cooperatives pay.

14. Three-fifths knew that a cooperative is exempt from paying income taxes when its income, above expenses, is distributed to members who are subject to income taxes.

Policies identified as those usually used by cooperatives:

15. Seven-tenths identified "open membership".

16. Two-thirds identified "one man-one vote".

17. Nearly 1/2 identified "cash trading".

18. Three-fourths identified "keeping members informed" (membership education).

19. One-half identified "political and religious neutrality".

20. One-half identified "assumption of no unusual risk".

21. Two-fifths identified "limited interest on stock",

22. Half identified "sell goods at regular retail prices",

23. Seven-tenths identified "distribution of net income according to patronage".

24. Only 2/5 knew that federal and state laws which deal specifically with cooperatives have been designed to legalize cooperative action, to provide means of incorporating associations, to provide rules by which such associations will operate on a cooperative basis, and to promote cooperatives as a method enabling managers and consumers to compete on a more satisfactory basis with others in the economy.

Steps identified that must be taken to organize a cooperative:

25. Seven-eighths identified "establish a need for a cooperative",

26. Two-thirds identified "draft articles of incorporation and become incorporated",

27. Seven-eighths identified "draw up by-laws and membership agreement",

28. More than 9/10 identified "elect directors",

29. Two-fifths identified "appoint a manager",

30. Nearly 2/5 identified "develop policies",

31. Nearly 9/10 identified "adopt plans for operating the cooperative",

32. About 7/8 identified "arrange for financing the cooperative".

33. Nearly 3/4 knew that a cooperative cannot always return the highest price for products nor always furnish supplies at the lowest cost.

34. Seven-tenths had learned that there are economic limitations to what cooperatives can do.

35. Two-thirds knew that cooperatives can make savings only when they bring about economies, eliminate unnecessary services, and operate efficiently.

36. Seven-eighths knew that members of a cooperative can help reduce operating costs on their cooperative by patronizing it.

37. Three-fifths had learned that a cooperative can legally operate as an independent local cooperative or as a part of a regional cooperative.

38. Only slightly more than 1/3 knew that equity capital is money supplied by the owners (members as an investment to make the cooperative possible).

39. A like portion (35.5%) had learned that non-equity capital is borrowed capital.

40. Seven-tenths knew 5 or more powers of the members of a cooperative.

41. Nearly half had learned 5 or more responsibilities of members of a cooperative. Seven-tenths had learned 4 or more such responsibilities.

42. Two-fifths had a general knowledge of the powers and responsibilities of members of the board of directors of a cooperative.

43. Nine-tenths knew 5 or more of the qualifications a manager of a cooperative should possess.

44. About 3/4 had learned that, in a cooperative, the jobs of management include planning, organizing, directing, coordinating, and controlling.

45. Two-thirds knew that the main purpose of the annual meeting of members of a cooperative is to provide the members with information about the cooperative and determine its broad policy.

46. Slightly more than 9/10 identified 3 or more situations that may cause a cooperative to fail.

47. Half knew that managing a cooperative is usually more difficult than managing a profit-type corporation of the same size.

SCOPE OF INSTRUCTION ON FARMER COOPERATIVES AND KINDS OF TEACHING MATERIALS NEEDED

The fourth objective was to determine the amount of instruction provided, the instructional areas included, and some of the other characteristics of the instruction on farmer cooperatives provided by teachers of vocational agriculture in Virginia. It also included determining the kinds of subject matter these teachers needed and wanted.

Findings

Two hundred (74%) of the experienced teachers of vocational agriculture located throughout Virginia provided data for this phase of the study. During the 1964-1965 school year, 57% provided instruction about farmer cooperatives for students enrolled in vocational agriculture classes.

Of the 114 teachers who provided instruction pertaining to farmer cooperatives:

28% taught a separate unit dealing with cooperatives;

66% taught cooperatives as a part of other subjects such as farm management, purchasing, and credit;

18% took students to a cooperative establishment and had its operation explained; and

11% provided instruction about cooperatives in conjunction with activities of the local chapter of the Future Farmers of America.

(Note: The above percentages total more than 100 because some teachers used more than one method of instruction.)

These findings are in general agreement with those of a similar survey made in Nebraska in 1959. That survey reported 42% of the teachers "taught cooperatives as a separate unit"; 60% "taught cooperatives as a part of other subjects such as farm management, marketing, purchasing, and credit"; and 5% "engaged in cooperative activities only within their Future Farmers of America programs".8/

Only 7% of the 200 teachers reported that students in their schools were receiving some instruction about cooperatives in courses other than vocational agriculture. Such courses included consumer business, economics, government, and history.

8/ Teaching About Cooperatives in the Vo-Ag Program in Nebraska High Schools, Richard G. Walsh, Gordon H. Busboom and Lyman F. Rehmeier, Department of Agricultural Economics Report No. 20, the Agricultural Experiment Station, University of Nebraska College of Agriculture, Lincoln, Nebraska. 1959. p. 1.

The 200 teachers who provided data for this phase of the study reported that as a result of the instruction and/or encouragement they provided, their students engaged in cooperative activities during 1964-65 to the extent indicated in the summary:

	Number of individuals
Engaged in cooperative purchasing	2,115
Engaged in cooperative marketing	1,022
Utilized cooperative service or agency	885
Utilized available cooperative credit	550
Engaged in cooperative FFA projects	4,991
Engaged in young or adult farmer cooperative projects	995
Total	10,558

(Note: Any of the participating individuals could have engaged in more than one of these activities.)

This investigation included the extent to which the 200 participating teachers of vocational agriculture provided instruction during 1964-65 in these 5 areas of cooperation:

(1) Cooperative purchasing (services provided, benefits realized, quality and standard of product available, influence of the organization upon the economy of the community, potential future development of the organization, and opportunities for improving the students' training programs)

(2) Cooperative marketing (services provided, costs, prices or unit values received by producers, influence of agencies upon the economic development of the community, and possibilities of improving the students' marketing practices)

(3) Cooperative services (services available, costs, constancy, competitive influences, increased productivity, and possible contributions to the students' training programs)

(4) Cooperative credit available

(5) Cooperative organization and management (need, economic laws and conditions, and activities which develop understandings and appreciations helpful to students)

The following is a summary of the extent to which instruction was provided by the 200 participating vocational agriculture teachers in 5 areas of cooperation during 1964-65:

Area of cooperation	Clock hours of instruction provided	Number of high school students receiving instruction	Number of farmers receiving instruction	Teachers providing instruction	
				Number	Per cent
Purchasing	258	1,940	526	79	39.5
Marketing	178	1,300	504	61	42.0
Services	105	1,113	324	46	23.0
Credit	121	721	487	40	20.0
Organization and management	127	389	167	29	14.5

The participating teachers were asked to indicate whether subject matter (teaching material) was needed and to specify the kind, if any, in each of 12 areas or topics dealing with farmer cooperatives. A summary of their responses follows.

	Proportion of participating teachers who:			
	Reported a need for subject matter	Specified the kind of subject matter needed was:		
		Lesson plan	Published information	List of available resource persons
200 teachers reported a need for subject matter dealing with:				
1. Determining the need for a cooperative	65.0%	57.0%	47.5%	27.0%
2. Methods and requirements for organizing a cooperative	55.0%	50.0%	43.5%	22.5%
3. Legal requirements for a cooperative organization	62.0%	53.5%	46.0%	22.5%
4. Financing and operating a cooperative	62.0%	52.0%	47.0%	23.0%
5. Fundamental concepts of cooperation	58.5%	50.5%	44.5%	21.0%
6. Policies and operating procedures of local farmer cooperatives	56.5%	50.5%	42.5%	25.5%
7. Services rendered by local cooperatives to members	56.0%	38.5%	45.0%	17.0%
8. Services rendered by local cooperatives to non-members	42.0%	27.0%	34.0%	16.0%
9. Financial statements of the kind and value of transactions made by local farmer cooperatives during the previous year	38.5%	24.0%	31.0%	17.0%
10. Financial statements of the kind and value of transactions made by local farmer cooperatives during the previous 5 years	32.0%	20.5%	27.0%	10.5%
11. Membership requirements for each local farmer cooperative	53.0%	30.5%	44.5%	15.5%
12. Responsibilities of members of each local farmer cooperative	46.5%	30.5%	40.5%	19.5%

Each teacher was asked to indicate the extent to which the instruction he had provided had enabled his students to develop adequate understandings and appreciation of what cooperatives can do for people with common problems, goals, and needs. The replies of 173 teachers who responded are summarized below.

Teachers who reported the instruction they had provided in the area of cooperatives was:

Fully adequate	0.5%
Only fairly adequate	50.8%
Inadequate	48.5%

A total of 192 teachers responded to the question: "Have you successfully completed one or more college courses in the field of cooperatives?" Only 23% had.

Summary

Providing instruction about cooperatives in conjunction with other subjects, such as farm management, marketing, purchasing, and credit, was used by more teachers than any other method.

An average of 52 students per teacher participated in one or more cooperative activities as a result of instruction and/or encouragement provided by the teachers.

The teachers provided an average of 3.9 hours of instruction on cooperatives per teacher during 1964-65. This is 2.1% of the 180 hours usually scheduled for a high school class each academic year.

A majority of the teachers reported a need for subject matter in 8 of the 12 areas of farmer cooperatives investigated. However, a majority designated a specific kind of subject matter (lesson plan) as needed in only ~~4~~5 of the areas, and not more than 57.0% expressed a need for a lesson plan in any one area. These findings indicate that most of the teachers did not feel an urgent need for subject matter pertaining to farmer cooperatives.

Half the teachers considered instruction they had provided on farmer cooperatives was "only fairly adequate" and nearly half considered such instruction "inadequate" to develop fully understandings and appreciations of what cooperatives can do for people with common problems, goals, and needs.

Less than 1/4 of the teachers had successfully completed a college course in the field of cooperatives.

INTERPRETATIONS, CONCLUSIONS, AND IMPLICATIONS

Securing a panel of 8 experts who identified the learning outcomes that should result from a reasonably effective educational program on farmer cooperatives was most helpful in establishing criteria for determining the knowledge farmers should acquire and had acquired in this area.

A majority of the farmers expressed need for and interest in studying, at some time, 32 of the 33 topics (subunits) investigated. Therefore, a majority had a definite desire to acquire knowledge about many aspects of farmer cooperatives.

The fact that advanced high school students answered correctly 69.0% of the 33 questions pertaining to farmer cooperatives was interpreted to mean they had a good general knowledge in this area. The participating farmers were even better informed. They had acquired knowledge of 36 (76.5%) of the 47 learning outcomes unanimously identified by the panel as those which should result from a reasonably effective educational program on farmer cooperatives for young people and adults enrolled in vocational agriculture classes.

More of the farmers had acquired information about farmer cooperatives from local cooperatives than from any other source. Therefore, it was concluded that the farmer cooperatives had been highly effective in providing farmers with information pertaining to their organizations.

A majority of the teachers reported a need for subject matter in 8 of the 12 areas of farmer cooperatives investigated. However, a majority of these teachers designated a specific kind of subject matter (lesson plan) as needed in only ~~4~~5of the areas, and not more than 57.0% expressed a need for a lesson plan in any one area. It was concluded that teachers did not feel an urgent need for subject matter (teaching material) on farmer cooperatives.

The teachers devoted an average of 3.9 hours per year to instruction on farmer cooperatives and they considered this "only fairly adequate" or "inadequate". Therefore, teachers of vocational agriculture in Virginia should make every practicable effort to provide instruction which will enable their students to understand adequately and appreciate what cooperatives can do for people with common problems, goals, and needs. For teachers who need instructional references on farmer cooperatives, Cooperatives: Today and Tomorrow[9] and Some Principles and Practices of Farmer Cooperatives[10] are recommended.

The learning outcomes identified by the panel of experts should be considered by vocational agriculture teachers when deciding what aspects to teach and the amount of time that should be devoted to instruction on farmer cooperatives.

Ways teachers may assist students in acquiring knowledge about farmer cooperatives include securing published information and explaining it to their

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9/ Cooperatives: Today and Tomorrow, Ewell Paul Roy. The Interstate Printers and Publishers, Danville, Illinois. 1964.

10/ Some Principles and Practices of Farmer Cooperatives, H. M. Olsen. The Interstate Printers and Publishers, Danville, Illinois. 1961.

students. Much published information is available from farmer cooperatives in Virginia and from the Farmer Cooperative Service of the United States Department of Agriculture.

Teachers and prospective teachers of vocational agriculture who have not completed a course in cooperatives should be encouraged to take such a course.

REFERENCES

Books

Olsen, H. M., Some Principles and Practices of Farmer Cooperatives, The Interstate Printers and Publishers, Inc., Danville, Illinois. 1961.

Roy, Ewell Paul, Cooperatives: Today and Tomorrow, The Interstate Printers and Publishers, Inc., Danville, Illinois. 1964.

Taylor, Carl C., The Farmers' Movement 1620-1920, The American Book Company, New York, New York. 1953.

Publications issued by the Farmer Cooperative Service, U.S. Department of Agriculture, Washington, D. C.

"Farmer Cooperatives in the United States," FCS Bulletin 1. Revised 1965.

"Farmer Cooperatives: Farm Business Tools," Agricultural Information Bulletin 275. January, 1964.

"Cooperative Business Training for Farm Youth," FCS Circular 1. January, 1954.

"The Story of Farmer Cooperatives," Educational Circular 1. June 1954.

"Guide for Teaching Farmer Cooperation," Educational Circular 3. November, 1954.

"Financing Farmer Cooperatives," Educational Circular 5. September, 1957.

"Forming Farmer Cooperatives," Educational Circular 10. April, 1956.

"Sizing Up Your Cooperative," Educational Circular 11. April, 1956.

"Farmer Cooperatives in Our Community," Educational Circular 12. August, 1956.

"Three Principles of Agricultural Cooperation," Educational Circular 13. November, 1958.

"Using a Local Cooperative as Source Material for Teaching," Educational Circular 14. October, 1958.

"Using Your Rural Credit Union," Educational Circular 16. September, 1959.

"How To Start A Cooperative," Educational Circular 18. April, 1965.

"Future Farmers and Co-ops," Educational Aid 4. February, 1957.

"Farmer Cooperatives and the Community," Information Leaflet 8. July, 1958.

"School Related Activities of Farmer Cooperatives," Information Leaflet 17. July, 1961.

"Co-ops Have a Place in Rural Community Progress," Information Leaflet 23. December, 1961.

"How Farmer Cooperatives Contribute to Agricultural Well-Being," Information Leaflet 37. April, 1963.

Miscellaneous Publications

Beiter, Robert J. and Clodus R. Smith, "Resource Unit for Teaching Agricultural Cooperation," Department of Agricultural and Extension Education, University of Maryland, College Park, Maryland. (Undated) 21 pp.

Barmettler, Edmund R., "Handbook for Teaching Farmer Cooperation," American Institute of Cooperation, Washington, D. C. (Undated) 33 pp.

Hemp, Paul, "Four Common Ways of Doing Business," Vocational Agriculture Service, University of Illinois, Urbana, Illinois. 1965. 6 pp.

Hemp, Paul and Norman D. Ehresman, "Source Unit on Agricultural Cooperatives: A Teacher's Guide for Instructional Planning," Division of Agricultural Education, University of Illinois, Urbana, Illinois. 1965. 64 pp.

Rawls, Byron F., "Structure of the Individually Owned Businesses, Jointly Owned Businesses, The Corporation, and Farmer Cooperatives," Education Service, Department of Education, Montgomery, Alabama. 1965. 7 pp.

Walsh, Richard G., Gordon H. Busboom, and Lyman F. Rehmeier, "Teaching About Agricultural Cooperatives in the Vo-Ag Program in Nebraska High Schools," Department of Agricultural Economics Report No. 20, The Agricultural Experiment Station, University of Nebraska College of Agriculture, Lincoln, Nebraska. (Report of a survey made in 1959.) 20 pp.

"County Agent's Manual On Cooperatives," Agriculture Handbook No. 295, Federal Extension Service, United States Department of Agriculture, Washington, D. C. 1965. 23 pp.

"The Family of Cooperatives Serving Virginia Farmers," Virginia Council of Farmer Cooperatives, Inc., P. O. Box 1034, Richmond, Virginia 23208. 1963. 48 pp.

APPENDIX A

PANEL OF EXPERTS

The name, title, and a brief summary of qualifications of each person on the panel is given below:

Emmett Buckles, Manager of Russell County Cooperative, Incorporated, Lebanon. Mr. Buckles was manager of a cooperative from 1946 to date (1966). He also served for 3 years as a member of the Board of Directors of the Virginia Council of Cooperatives, Incorporated.

R. Lee Chambliss, Jr., Associate Professor of Agricultural Economics, Virginia Polytechnic Institute. Professor Chambliss has successfully completed undergraduate and graduate courses in cooperatives at Virginia Polytechnic Institute and at the University of Minnesota. He has taught a course at Virginia Polytechnic Institute entitled "Economics of Cooperation" from 1948 to date. This course dealt with farmer cooperatives.

John H. East, President of Augusta Cooperative Farm Bureau, Incorporated, Staunton. Mr. East earned a bachelor of science degree at Virginia Polytechnic Institute in 1917. He received the award for distinguished service to Virginia agriculture at Virginia Polytechnic Institute in 1940. He has been associated with one or more cooperatives from 1930 to date, as director, manager, and later as president.

Julian A. Everly, Manager of the Federal Land Bank Association and Manager of the Production Credit Association, 45 East Boscawen Street, Winchester. Mr. Everly has worked with farm credit organizations from 1934 to date. During World War II he was a member of the Agricultural Production Board for Frederick and Clarke Counties. He had served on the Clarke County School Board for twenty years and was vice chairman at the time this study was made. On several occasions he conducted "property appraisal" classes for vocational agriculture students at the James Wood High School, Winchester. He was serving on the State Advisory Council to the V.P.I. College of Agriculture at the time this study was made.

Orville B. Helton, Branch Plant Manager (Fertilizer Plant), Cooperative Fertilizer Service, Incorporated, Rt. 4, Box 52, Bristol. Mr. Helton is a qualified accountant and business administrator. He was general bookkeeper in a wholesale cooperative from 1947 to 1953 and was manager of a wholesale cooperative from 1953 to 1957.

D. Upton Livermore, Professor of Agricultural Economics, Virginia Polytechnic Institute. Professor Livermore earned a bachelor of science degree at Virginia Polytechnic Institute in 1950 and a master of science degree at Michigan State University in 1960. He was a farm operator for 12 years and was a member of 3 farmer cooperatives during this period. He was Extension specialist in poultry and egg marketing in Virginia from 1950 to 1952, and has been Extension specialist in management of farm service agencies from 1952 to date. During one term he taught a course in cooperative marketing at Virginia Polytechnic Institute. He has been project leader of Extension Project IV, Marketing and Utilization of Agricultural Products, from its inception in 1962 to date.

Anderson Grant Moffett, Assistant Director of Market Development, Virginia Department of Agriculture, Richmond. Mr. Moffett qualified for a bachelor of science degree at Virginia Polytechnic Institute in 1941. His duties with the Department include providing assistance in organizing marketing cooperatives for vegetables, fruits, and livestock; serving as advisor to a bargaining cooperative for sweet potatoes; providing service for cooperatives to secure charter approval before the State Corporation Commission; and serving as advisor, representing the State Department of Agriculture, to the Virginia Council of Farmer Cooperatives.

Edward B. Tucker, Manager of the Southside Co-Operative Milk Producers Association, Incorporated, Blackstone. Mr. Tucker majored in agricultural economics in college and earned a bachelor of science degree at Virginia Polytechnic Institute in 1941. Prior to accepting his present position, he was employed by the Farmers Home Administration.

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EDUCATIONAL STATISTICS FOR NEPAL

Prepared by

Hugh B. Wood
Professor of Education, University of Oregon
Educational Adviser, His Majesty's Government of Nepal
1953-1959, 1962

Published by

The American Nepal Education Foundation
P. O. Box 5123, Eugene, Oregon

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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EDUCATIONAL STATISTICS FOR NEPAL[1]

Prepared by

Hugh B. Wood

Introduction

Nepal until recently has been a little-known undeveloped country. Since 1951 there have been major developments politically, socially, and educationally; much less, economically. Other than census taking, there has been almost no official government effort to collect and compile data relating to these developments. This bulletin presents statistics for education, such as they are, up to approximately the end of 1961.

These statistics, for the most part, must be accepted as carefully evaluated estimates, compiled mostly by the author from raw data furnished by various Nepal government and other agencies. Though some scattered data have been published earlier by others (and they may well differ from those presented here) this is the first comprehensive and unified presentation of these data, developed as a result of a single study and evaluation of the interrelationships among the data, and based on an intimate knowledge of their plausibility.

Some explanation is given regarding the derivation of data, especially if interpolated, but fuller explanations, together with interpretations and projections to 1970 will be found in Educational Planning in Nepal and Its Economic Implications when it becomes generally available.[2]

General Population

According to a preliminary report of the 1961 census, the population of Nepal then was 9,701,161. This represents an annual increase of about 1.9% since the 1952-54 census. The area of Nepal is 54,563 square miles; thus the density of population averages about 178 persons per square mile, but it varies from 2,096 in the Kathmandu valley to none in the high Himalayas.

Until 1961 the country was divided into 32 political districts; thus the few statistics available are usually arranged by these districts, which are shown in Figure 1. (The country now has been organized into 14 zones which combine some of the districts, and into 75 blocks which recognize some of the former sub-districts.)

Nepal's people live in about 28,770 small villages. Only six towns have a population of more than 10,000; six more have a population of 5,000-10,000. In 1952-54, 93.5% of the active population engaged in agriculture, forestry, and fishing; 2.3% engaged in services; and 1.9% in manufacturing.

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[1] The statistics presented in this bulletin were collected by the author during his service in Nepal as Director of the University of Oregon /ICA/ Nepal contract (1954-59) and as Educational Specialist, Unesco (January-May, 1962). They have been partially reported in Education in Nepal (Kathmandu: Bureau of Publications, College of Education, 1956. 259 p.) and Educational Planning in Nepal and Its Economic Implications (draft report of the Unesco Mission to Nepal, January-May, 1962, with Bruno Knall; mimeographed, restricted circulation in draft form).

[2] Ibid.

The Nepal government has officially sanctioned a 5-5-4 system of education; thus age-group populations have been determined for 6-10 (primary), 11-15 (secondary), and 16-19 (college). These groups represent 11.91%, 10.56%, and 7.8% of the total population, respectively.[3] General and age-group population distribution by political districts is shown in Table II.

School Enrollment

A Decade of Growth. General development of education from 1951 to 1961 is shown in Table I.

Primary and Secondary Education. Basic data for 1961 for primary and secondary schools are shown in Table II.

Higher Education. A unified system of higher education has been proposed for Nepal; all colleges presumably will eventually come under the University. Rapid expansion of higher education is revealed in Table I. Table III provides specific data for the colleges as of th [illegible] f 1961. In addition to students attending colleges in Nepal, some have gone abroad for study; data for these students, by years (1952-1961) and areas of study, are shown in Table IV. Wastage in college, as reflected by examination results, is shown in Table XV.

Teacher Education. Only a few teachers were trained (for Basic Education schools) prior to 1954. In this year a Normal School was established in Kathmandu to train primary school teachers. Two years later a number of mobile normal school teams were organized to move about from one district headquarters to another with a 10-month's course, and a College of Education was established in the capital to train secondary school teachers, administrators, and normal school staff members. The number of primary school teachers trained in the different political districts and the relationships to general educational development therein are shown in Table V. The total number of teachers trained by years from 1954 to 1961 was: 118, 385 124, 402, 705, 569, 684, and 611, for a total of 3,598. The total number of normal school staff members required for this training from 1954 to 1961 was 22, 25, 26, 28, 40, 39, 49, and 45.

The number of graduates of the College of Education was as follows: 1958, 1; 1959, 11; 1960, 36; 1961, 27, for a total of 75. The enrollment has varied from 190 in 1958 to 150 in 1961.

Special Technical Training. About 3,900 persons have received special technical training, varying in length from three months to 3½ years, in some 24 programs or institutions. The nature of this training and the enrollments for 1961 are shown in Table VI.

Adult Education. Adult literacy classes were inaugurated in 1956 (first materials were printed in 1954). Other types of adult education have been provided by the Village Development Program on a limited scale (agricultural, sanitation, and homemaking information). In addition, all Gurkha soldiers recruited by the Indian and British armies are taught to read and write. The number of classes, students, and materials printed are shown in Table VII.

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[3] Age groups of 5-9, 10-14, and 15-19, established in the 1952-54 census, were converted by Sprague's Multiplier Table to 6-10, 11-15, and 16-19, and these were found to be the respective percentages of total population shown above.

Expenditures for Education[4]

Total Government Expenditures. Government expenditures are of two types, regular and developmental, but there is enough overlapping (e.g., operational salaries paid from the developmental budget; new school buildings paid from the regular budget) to make total expenditures more meaningful than either regular or developmental figures. In education, the addition of developmental funds beginning in 1953 resulted in some decrease in the regular budget for the next few years (as the developmental budget absorbed some expenditures of the regular budget). Government expenditures for education and other government services are shown in Table VIII. (Government expenditures are centralized in Kathmandu; district and local government units do not, as a rule, spend funds.)

Developmental funds have come mostly from foreign aid, which began in 1952 (U.S.A. and India). Total contributions from this source for all services from 1952 to 1961 are summarized in Table IX. The distribution of this aid among the several services is shown in Table X.

The Nepal government has contributed modestly to the developmental funds, but in decreasing ratio; in 1958-59 HMG contributed 29% of the total; in 1959-60, 13%; and in 1960-61, 6%. (This was largely due to rapidly increasing amounts of foreign aid.)

Although the expenditure of developmental funds was budgeted through a Five-Year Plan, only in Education were the funds expended according to plan. In Village Development only 62.8% of the budget was spent between 1956 and 1961; in Agriculture and Forestry, 21.7%; Transport and Communications, 76.5%; Power, 44.5%; Industries, Mining, Tourism, 41.4%; Health, 64%; Education, 112%; Irrigation and Drinking Water, 65.6%; Miscellaneous, 94.2%.

Costs of Education.[5] There are no accurate estimates of non-government expenditures on education, but these are known to consist of personal gifts of money and kind, free or partially paid teaching services, and tuition charges varying from a maximum of Rs. 0.50 for Grade I to Rs. 6.00 for Grade X per month in schools receiving government grants, to as high as Rs. 35 per month in strictly private schools.

As indicated above, an analysis of regular and developmental funds has little meaning; therefore Table XI shows the total operational costs of the different sectors of education and the unit costs from 1957 to 1961 (data prior to this date are incomplete). Government expenditures for capital outlay have been minimal except for: press equipment, about Rs. 400,000 and land and buildings for higher education, about Rs. 950,000.

Miscellaneous Data

The organization of the education system and the educational pyramid have not changed substantially since 1954 when they were described in Education in

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[4] Both Indian and Nepali rupees are used in Nepal. Foreign aid contributions are mostly in foreign currency. For these reasons, all financial data have been converted to Nepali rupees.

[5] Additional financial data, analyses, interpretations, and explanations relative to this section may be found in: Upraity, Trailokya Nath. Financing Elementary Education in Nepal. Eugene: The American-Nepal Education Foundation, (P. O. Box 5123) 1962. 330 p. (Doctor's Dissertation, University of Oregon.)

Nepal.[6] The ministry is described in more detail in Ministries of Education.[7]

Types of Schools. Although the government has officially declared that there shall be only one type of primary school (called "National" and outlined by the National Education Planning Commission in Education in Nepal) and one type of secondary school (multi-purpose, or comprehensive, including vocational training, as outlined by the NEPC in Education in Nepal), there have been several types of each, and these still exist to a large extent. These are shown in Tables XII and XIII.

Education of Girls. The percentage of girls attending school has increased as shown in Table XIV.

Wastage in Education. No attrition data are available for primary education, but it is well known that attendance is erratic and drop-outs heavy at the end of the second and third grades (children enter family employment).

The wastage at the end of the secondary school, two years of college, and at the end of college, as represented by those who fail the final examinations, is shown in Table XV. However, failure in the "practical" or "vocational" colleges is considerably less than in the academic colleges, averaging only 44% for Commerce, 18% for Education, and 16% for Law, as against 55% for Liberal Arts, 58% for Sanskrit, and 64% for Science.

Production of Professional Materials. The amount of professional materials produced from 1954 to 1961, under government auspices, is shown in Table XVI.

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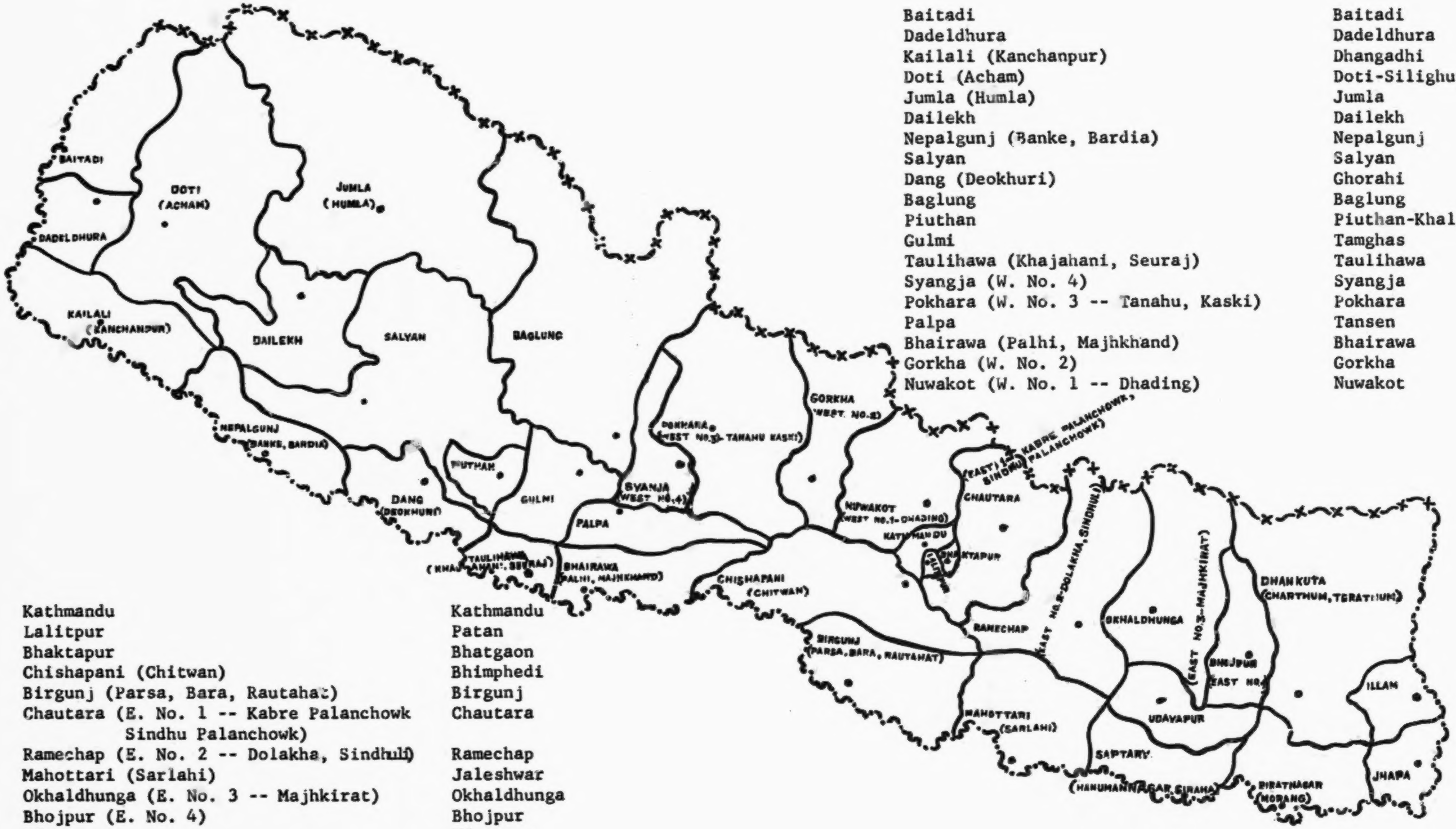
[6] Op. Cit.

[7] Heath, Kathryn G. "Kingdom of Nepal," in Ministries of Education: Their Functions and Organization. Washington: U. S. Office of Education, 1962. p. 443-51.

Figure 1. Map of Nepal: Political Districts and Headquarters


BAITADI
DADELDHURA
KAILALI (KANCHANPUR)
DOTI (ACHAM)
JUMLA (HUMLA)
DAILEKH
SALYAN
BAGLUNG
NEPALGUNJ (BANKE, BARDIA)
DANG (DEOKHURI)
PIUTHAN
GULMI
TAULIHAWA (KHAJAHANI, SEURAJ)
BHAIRAWA (PALHI, MAJHKHAND)
PALPA
SYANJA (WEST NO.4)
POKHARA (WEST NO.3 - TANAHU KASKI)
GORKHA (WEST NO.2)
NUWAKOT (WEST NO.1-DHADING)
KATHMANDU
LALITPUR
BHAKTAPUR
CHISHAPANI (CHITWAN)
(EAST) 1 - KABRE PALANCHOWK, SINDHU PALANCHOWK)
CHAUTARA
BIRGUNJ (PARSA, BARA, RAUTAHAT)
RAMECHAP
EAST NO.2-DOLAKHA, SINDHULI)
MAHOTTARI (SARLAHI)
OKHALDHUNGA
(EAST NO.3-MAJHKIRAT)
BHOJPUR (EAST NO.4)
UDAYAPUR
SAPTARY (HANUMANNAGAR, SIRAHA)
DHANKUTA (CHARTHUM, TERATHUM)
BIRATNAGAR (MORANG)
ILLAM
JHAPA

District	Headquarters
Baitadi	Baitadi
Dadeldhura	Dadeldhura
Kailali (Kanchanpur)	Dhangadhi
Doti (Acham)	Doti-Silighuri
Jumla (Humla)	Jumla
Dailekh	Dailekh
Nepalgunj (Banke, Bardia)	Nepalgunj
Salyan	Salyan
Dang (Deokhuri)	Ghorahi
Baglung	Baglung
Piuthan	Piuthan-Khalanga
Gulmi	Tamghas
Taulihawa (Khajahani, Seuraj)	Taulihawa
Syangja (W. No. 4)	Syangja
Pokhara (W. No. 3 -- Tanahu, Kaski)	Pokhara
Palpa	Tansen
Bhairawa (Palhi, Majhkhand)	Bhairawa
Gorkha (W. No. 2)	Gorkha
Nuwakot (W. No. 1 -- Dhading)	Nuwakot
Kathmandu	Kathmandu
Lalitpur	Patan
Bhaktapur	Bhatgaon
Chishapani (Chitwan)	Bhimphedi
Birgunj (Parsa, Bara, Rautahat)	Birgunj
Chautara (E. No. 1 -- Kabre Palanchowk Sindhu Palanchowk)	Chautara
Ramechap (E. No. 2 -- Dolakha, Sindhuli)	Ramechap
Mahottari (Sarlahi)	Jaleshwar
Okhaldhunga (E. No. 3 -- Majhkirat)	Okhaldhunga
Bhojpur (E. No. 4)	Bhojpur
Udayapur	Udayapur
Saptari (Hanumannagar, Siraha)	Rajbiraj
Dhankuta (Charthum, Terathum)	Dhankuta
Biratnagar (Morang)	Biratnagar
Illam	Illam
Jhapa	Bhadrapur

Table I. Growth of Education in Nepal, 1951-61*

I. Population:	1951			1954			1961		
	Number (000)	% in School	Education[c] Budget (Rs. 000)	Number (000)	% in School	Education[c] Budget (Rs. 000)	Number (000)	% in School	Education[f] Budget (Rs. 000)
Total	8,167[a]	0.1%	650	8,552	0.9%	2,735	9,701	2.2%	10,825
Prim. Sch. Age (6-10)	972[a]	0.9[b]	250	1,018[d]	5.6[b]	655	1,155[e]	15.8[b]	5,556
Sec. Sch. Age (11-15)	863[a]	0.3[b]	400	904[d]	1.6[b]	2,080	1,025[e]	2.1[b]	1,082
College Age (16-19)	637[a]	0.04		667[d]	0.1		757[e]	0.7	3,186

II. Institutions:	1951			1954			1961			Tot. No.[h] Completed (to 1961)
	Number[c]	Enrollment	Staff	Number[g]	Enrollment[g]	Staff[g]	Number[h]	Enrollment[h]	Staff[h]	
Primary Schools	310	6,590[i]	ne	921	26,186	1,278	3,845	182,533	7,281	100,000[j]
Middle Schools		1,915[i]	ne	316	33,408	1,325	(Counted as Prim. or Sec. Sch.)			
High Schools	11	1,680[i]	ne	83	12,697	921	156	21,115	1,612	9,876
Sub Total:	321	10,185[i]	ne	1,320	72,291	3,524	4,001	203,648	8,893	
Colleges	2	250[c]	ne	14	915	86	33	5,143	417	3,800
Normal Schools	1	20[c]	ne	1	60	11	15	611	45	3,598
Spec. Tech. Schools	2	ne	ne	6	341	46	24	1,562	119	3,895
Adult Classes	"few"	ne	ne	0	0	0	402	10,050	402	47,950
Training Under Foreign Scholarships		"few"			143			347		1,567

Footnotes, Table I

*Source: 1951, mostly estimates projected back from 1954; 1954 mostly from 1954 Census and Education in Nepal, (Kathmandu: Bureau of Publications, College of Education, 1956); 1961, mostly from 1961 Census and direct compilation. In general, rounded numbers are estimates, exact numbers are from actual statistics. This table also appears in Educational Planning in Nepal, Ibid.

[ne] No estimate available.

[a] Estimate derived by reducing 1954 figure by 4.5% (1.5% per year).

[b] In determining this percentage, children in grades I to V of the "middle" and "high" schools were counted as primary school children.

[c] Source: Upraity, T. N., Financing Primary Education in Nepal, Op. Cit.

[d] Estimate derived by applying Sprague's Multiplier Table to 1954 Census age-group data.

[e] Estimate derived by applying 1954 Census age-group ratios to the 1961 Census total.

[f] The total includes (in Rs. 000): administration, Rs. 805; educational materials, Rs. 153; adult literacy, Rs. 43; plus primary, secondary and higher education. Primary education includes Rs. 629 for normal schools.

[g] Source: Education in Nepal, Op. Cit.

[h] Source: Compiled directly from institution or Education Ministry data.

[i] Estimates derived by prorating 1954 known school size data to Upraity's estimate of the number of schools in 1951.

[j] This datum is only an "educated guess" by qualified educators. It does not include some 60,000 living ex-Gurkha soldiers (est.) who have had the equivalent of primary school education. It may be compared with the estimated number of literates, approximately 600,000 (6% of 9,701,000). (The 1954 Census reported that 11,986 had completed primary school by that date; this estimate assumes 6,000 in 1955, 8,000 in 1956, 10,000 in 1957, 12,000 in 1958, 15,000 in 1959, 17,000 in 1960, and 20,000 in 1961; +12,000 = 100,000.)

Table II. Geographical Distribution of Primary and Secondary Education in Nepal, 1961*

District	Total Pop.	Primary Schools (Age 6-10) School-Age Pop.	Enroll.	% of Sch.-age Pop. in Sch.	No. Schs.	No. of Tchrs.	Tchr-Pup. Ratio	Secondary Schools (Age 11-15) School-Age Pop.	Enroll.	% of Sch.-age Pop. in Sch.	No. Schs.	No. of Tchrs.	Tchr-Pup. Ratio	Totals Enroll.	No. Schs.	No. of Tchrs.
Baitadi	158,612	18,900	5,435	28.8	99	186	1:29	16,700	390	2.3	3	23	1:17	5,825	102	209
Dadeldhura	82,261	9,800	1,951	19.9	60	90	1:22	8,700	172	2.0	2	19	1:9	2,123	62	109
Kailali	108,604	12,900	1,136	8.8	45	54	1:21	11,500	55	0.5	1	4	1:14	1,191	46	58
Doti	434,683	51,800	5,297	10.2	144	194	1:27	46,000	260	0.6	7	34	1:8	5,557	151	228
Jumla	184,411	22,000	2,301	10.4	70	85	1:27	19,500	178	0.9	-	14	1:13	2,479	70	99
Dailekh	210,630	25,000	1,838	7.4	72	86	1:21	22,200	115	0.5	1	10	1:12	1,953	73	96
Nepalgunj	162,930	19,400	3,256	16.8	76	130	1:25	17,200	532	3.1	4	33	1:16	3,788	80	163
Salyan	415,022	49,400	1,413	2.9	69	77	1:18	43,800	92	0.2	1	8	1:12	1,505	70	85
Dang	98,765	11,800	2,867	24.3	57	127	1:23	10,400	335	3.2	3	30	1:11	3,202	60	157
Baglung	227,713	27,100	4,221	15.6	79	155	1:27	24,000	302	1.3	1	24	1:13	4,523	80	179
Piuthan	212,700	25,300	2,506	9.9	81	107	1:23	22,500	193	0.9	2	21	1:9	2,699	83	128
Gulmi	302,005	36,000	6,222	17.3	111	159	1:39	31,900	561	1.8	2	36	1:16	6,783	113	195
Taulihawa	162,573	19,400	1,972	10.2	77	100	1:20	17,200	329	1.9	4	22	1:15	2,301	81	122
Syanja (W. 4)	341,147	40,600	5,674	14.0	119	226	1:25	36,000	307	0.9	1	23	1:13	5,981	120	249
Pokhara (W. 3)	255,093	30,400	9,838	32.4	210	423	1:23	26,900	897	3.3	7	73	1:12	10,735	217	496
Palpa	172,307	20,500	4,201	20.5	71	180	1:23	18,200	657	3.6	3	35	1:19	4,858	74	215
Bhairawa	255,166	30,400	4,087	13.4	73	148	1:28	26,900	538	2.0	3	44	1:12	4,625	76	192
Gurkha (W. 2)	152,534	18,200	3,556	19.5	75	98	1:36	16,100	205	1.3	1	11	1:19	3,761	76	109
Nuwakot (W. 1)	400,554	47,700	2,677	5.6	112	144	1:19	42,300	253	0.6	1	18	1:14	2,930	113	162
Kathmandu	220,391	26,200	10,270	39.2	74	401	1:26	23,300	3,736	16.0	29	251	1:15	14,006	103	652
Lalitpur	147,323	17,500	6,143	35.1	88	286	1:21	15,600	907	5.8	8	78	1:12	7,050	96	364
Bhaktapur	89,090	10,600	3,484	32.9	69	190	1:18	9,400	213	2.3	4	36	1:6	3,697	73	226
Chishapani	273,042	32,500	4,768	14.7	111	168	1:28	28,800	373	1.3	1	29	1:13	5,141	112	197
Birgunj	672,182	80,100	12,318	15.4	258	438	1:26	71,000	1,141	1.6	7	85	1:13	13,459	265	523
Chautara (E. 1)	400,554	47,700	6,043	12.7	136	244	1:25	42,300	333	0.8	4	43	1:8	6,376	140	287
Ramechap (E. 2)	341,938	40,700	4,601	11.3	118	151	1:30	36,100	247	0.7	3	19	1:13	4,848	121	170
Mahottari	552,934	65,900	10,445	15.8	212	481	1:22	58,400	1,654	2.8	11	121	1:14	12,099	223	602
Okhaldhunga (E. 3)	292,131	34,800	4,130	11.9	91	136	1:30	30,800	415	1.3	1	22	1:19	4,545	92	158
Bhojpur (E. 4)	252,452	30,100	4,506	15.0	93	172	1:26	26,700	549	2.1	3	47	1:12	5,055	96	219
Udayapur	89,367	10,600	1,396	13.2	35	52	1:27	9,400	66	0.7	-	8	1:8	1,462	35	60
Saptari	510,810	60,800	9,274	15.3	148	409	1:23	53,900	1,227	2.3	8	88	1:14	10,501	156	497
Dhankuta	558,167	66,500	9,398	14.1	187	443	1:21	58,900	1,592	2.7	9	124	1:13	10,990	196	567
Biratnagar	324,356	38,600	8,464	21.9	121	287	1:29	34,300	1,230	3.6	12	85	1:14	9,694	133	372
Illam	124,219	14,800	2,895	19.6	84	119	1:24	13,100	292	3.0	3	34	1:12	3,287	87	153
Jhapa	119,752	14,300	1,745	12.2	40	86	1:20	12,600	466	3.7	3	46	1:10	2,211	43	132
Sub-Totals	9,306,418	1,108,300	170,328		3,564	6,832		982,600	20,912		153	1,598		191,240	3,718	8,430
Migrants	313,500	47,100	12,205[a]		280[a]	449[a]		41,800	203[a]		3[a]	14[a]		12,408	283	463
Unaccounted for	81,243															
TOTALS	9,701,161	1,155,400	182,533	15.8	3,844	7,281	1:25	1,024,400	21,115	2.1	156	1,612	1:13	203,648	4,001	8,893

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*Source: 1961 Census for total population data. The primary and secondary school age-group data were determined by applying 1952-54 Census age-group percentages to the 1961 Census data, and represent 11.91% and 10.56% respectively, of the total population. The enrollment data and number of schools and teachers were obtained from the Education Ministry, but pupils and teachers of grades 1-5 of middle and high schools were shifted to the primary school columns (estimates were determined by a process described in the footnote of Table D of Educational Planning in Nepal, Ibid.)

[a] These figures include the Soldier Board and Gurkha Army schools, data for which are not available by districts; obviously they are not schools established for the "migrants" and "unaccounted for."

Table III. Institutions of Higher Education in Nepal, 1961*

Name & Location	Year Founded	Type	No. Staff Members	No. of Students	Teacher[a] Student Ratio
UNIVERSITY:					
Tribhuwan Univ., Kathmandu	1959	Post Grad. Only	32	260	1:8
PROFESSIONAL:					
Law College, Kathmandu	1954	Post Grad., 2 Yr.	8	181	1:23
College of Education, Kathmandu	1956	Degree	27	150	1:6
Pub. Commerce College, Kathmandu	1958	Degree (Night)	14	253	1:23
LIBERAL ARTS & SCIENCE: (Kathmandu Valley)					
Tri Chandra College, Kathmandu	1918	L.A., Sc., Com. Degree	72	(L.A.)383 (Sc.) 640 (Com) 527	1:23
Sanskrit College, Kathmandu	1948	Degree P. Grad.	16	142	1:9
Padma Kanya College, Kathmandu	1951	L.A. Degree	16	306	1:22
Nepal National College, Kathmandu	1951	L.A. Degree (Night)	23	385	1:22
Durbar College, Kathmandu	1952	L.A. Degree	9	156	1:18
Patan College, Patan	1954	L.A. Degree	17	215	1:17
Public Science College, Kathmandu	1956	Sc. Inter	8	303	1:38
Bhaktapur Inter College, Bhatgoan	1959	L.A. Inter	9	52	1:7
Saraswati Inter College, Kathmandu	1959	L.A. Inter	16	86	1:8
Ratna Rajya Laxmi College, Kathmandu (Girls)[b]	1961	L.A. Inter (Morn)	15	62	1:8
(East Nepal)					
Mahendra Degree College, Dharan	1955	L.A., Com. Degree	14	107[c]	1:9
Dhankuta Degree College, Dhankuta	1955	L.A. Degree	7	36	1:5
Morang College, Biratnagar	1956	L.A., Sc., Com. Degree	26	206[c]	1:8
Janakpur Degree College, Janakpur	1958	L.A. Degree	7	141	1:26
Sanskrit College, Janakpur		Sans. Degree	ne	ne	
Sanskrit College, Dharan		Sans. Degree	19	168	1:9
Sanskrit College, Dingla		Sans. Degree	ne	ne	
Bhola Inter College, Chainpur	1960	L.A. Degree	4	22	1:6
Mahendra Ratna College, Illam	1960	L.A. Degree	4	26	1:7
(West Nepal)					
Mahendra Bindeswari College, Rajbiraj	1957	L.A., Sc. Degree	8	74[c]	1:9
Tribhuwan Degree College, Tansen	1958	L.A. Degree	10	55	1:7
Shri MBB Shah College, Ghorahi (Dang)	1959	L.A. Degree	6	6	1:1
Sanskrit College, Dang		Sans. Degree	ne	ne	
Prithivi Narayan Int. Col., Pokhara	1960	L.A. Inter	5	26	1:6
Narayan Inter College, Nepalgunj		L.A., Sc. Inter	12	90[c]	1:8
Kapil Bastu Int. Col., Taulihawa[b]		L.A. Inter	ne	ne	
Chuhan Hill Int. Col., Chuhandada (West No. 3)[b]		L.A. Inter	ne	ne	
(Central Nepal)					
Thakur Ram Deg. College, Birgunj	1952	L.A. Degree	13	85	1:7
Sanskrit College, Kalaiya		Sans. Degree	ne	ne	
TOTAL			417[d]	5,143[d]	1:14
Sub-Totals:			L.A.	2,801	54%
			Sc.	1,118	22%
			Prof.	1,216	24%

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*Based on 1961 Committee Report, (Kathmandu: Ministry of Education - unpublished), p. 35-6; corrected from revised data submitted by institutions.

[a] In calculating teacher-student ratios, "part-time" staff members were counted as half time.

[b] Not yet "recognized" by the Government.

[c] Estimates on distribution of students: Mahendra Degree: L.A. 77, Com. 30; Morang: L.A. 50, Sc. 81, Com. 75; M.B. Col.: L.A. 30, Sc. 44; Narayan: L.A. 40, Sc. 50.

[d] Incomplete totals.

[ne] No estimate available.

Table IV. Study in Foreign Colleges, 1951-1961*

Subject	Up to 1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	Total No. Sent[a]
General Education	31	40	26	58	56	55	38	23	33	55	415
Agriculture	21	16	24	7	34	24	37	29	32	53	277
Village Development	--	--	1	--	1	1	3	14	5	16	41
Forestry	--	--	4	1	7	7	14	7	9	6	55
Industry	--	--	--	1	--	2	7	12	3	11	36
Mining	1	4	5	2	--	4	1	3	10	5	35
Engineering	20	31	24	28	38	47	69	114	116	116	603
Aviation	--	16	--	--	3	1	1	4	4	4	33
Communication	17	1	7	9	1	8	17	3	3	1	67
Publicity	--	2	2	2	--	--	1	--	--	2	9
Survey & Statistics	1	1	1	7	3	3	1	--	3	6	26
Health	42	25	36	19	33	48	54	67	49	45	418
Administration	--	3	3	7	5	7	8	7	4	9	53
Co-operatives	--	1	--	--	--	2	1	6	16	--	26
Fine Arts & Crafts	--	--	3	2	--	--	--	--	--	2	7
Law	2	--	2	4	1	--	--	1	--	1	11
Police	2	--	2	6	8	3	5	--	1	10	37
Tax, Customs & Excise	--	1	3	4	--	--	--	--	1	2	11
Tourism	--	--	--	--	--	--	--	--	--	3	3
Totals:	137	141	143	157	190	212	257	290	289	347	2,163

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*Source: National Planning Council Secretariat, HMG.

[a] These students were sent to the following countries: India, 1401; U.S.A., 225; Malaya, 100; U.S.S.R. & U.K. 61 and 62; Pakistan, Australia, China, and Israel, 28, 22, 14, and 14; and Burma, West Germany, Czechoslovakia, Japan, Ceylon, New Zealand, Poland, Hawaii, Canada, France, and Yugoslavia, one to ten each.

Table V. Distribution of Trained Primary School Teachers in Nepal, 1954-61*

District	% of Primary-Age Children in School	No. of Primary School Teachers[a]		Ratio of Trained Primary School Teachers to Total
		Trained	Total	
Baitadi	28.8	158	186	85%
Dadeldhura	19.9	57	90	63%
Kaileli	8.8	0	54	0%
Doti	10.2	126	194	65%
Jumla	10.4	0	85	0%
Dailekh	7.4	75	86	87%
Nepalgunj	16.8	221	130	170%
Salyan	2.9	40	77	52%
Dang	24.3	60	127	47%
Baglung	15.6	0	155	0%
Piuthan	9.9	0	107	0%
Gulmi	17.3	27	159	17%
Taulihawa	10.2	111	100	111%
Syangja (West No. 4)	14.0	25	226	11%
Pokhara (West No. 3)	32.4	253	423	60%
Palpa	20.5	85	180	47%
Bhairawa	13.4	41	148	28%
Gorkha (West No. 2)	19.5	88	98	90%
Nowakot (West No. 1)	5.6	17	144	12%
Kathmandu	39.2	987[b]	877	113%
Lalitpur	35.1	0		
Bhaktapur	32.9	0		
Chisapani	14.7	0[b]	606	81%
Birgunj	15.4	493		
Chautara (East No. 1)	12.7	46	244	19%
Ramechap (East No. 2)	11.3	0	151	0%
Mahottari	15.8	187	481	39%
Okhaldhunga (East No. 3)	11.9	57	136	42%
Bhojpur (East No. 4)	15.0	62	172	36%
Udayapur	13.2	0[b]	461	0%
Saptari	15.3	0		
Dhankuta	14.1	84	443	19%
Biratnagar	21.9	191	287	67%
Illam	19.6	107[b]	205	52%
Jhapa	12.2	0		
Total	15.8	3,598	6,832	52%

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*Source: Table II and College of Education, Normal School Division, Kathmandu.

[a] The first number in this column is the number of primary teachers that have been trained in the district; it should not be inferred that all of them are included in the "total," but they presumably are available in the district, if not already employed.

[b] Possible grouping for training purposes: districts are adjacent to each other.

Table VI. Scope of Special Technical Training in Nepal, 1961*

Institution	Enrollment (1961)	Staff (1961)	Total Trained to 1961
(HEALTH)			
Nurses Training School	46	7	24
United Mission Hospital	8	3	3
Health Assistants School	46	7	65
(AGRICULTURE, FORESTS, HOME ECONOMICS)			
Rural Institutes (2)	159	25	1,360
School of Agriculture	78	13	301
Dairy Training	0	0	6
Forestry Institute	103	4	102
Home Ec. Training School	40	6	125
Irrigation School	17	2	0
(INDUSTRY)			
Cottage Industry Training Center(s)	466	18	1,133
Swiss Mechanical Training School	4	2	8
Red Cross Tibetan Relief School	280	6	0
Technical Training School	(To be established, 1962)		
(ENGINEERING)			
Engineering School	20	2	20
Overseas Training	101	5	32
Cadastral Survey Schools (4)	0	0	548
Mining Training School	16	8	0
Tele-communication School	143	10	0
(ADMINISTRATION)			
Clerks-Sec. Training Center	35	2	0
Population Census Training	0	4	168
Totals: (24 institutions)	1,562	124	3,895
Gurkha Soldiers Training:	(est. 1,000 per year)		(est. 10,000-20,000)

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*Source: Data furnished by the National Planning Council Secretariat, HMG, Kathmandu.

Table VII. Adult Literacy Program in Nepal, 1954-1961*

Year	No. of Classes	No. of Students Given 6 Months Training	Materials Printed (copies)
1954			30,000
1956	39	1,000	44,000
1957	301	7,525	147,000
1958	220	5,500	76,000
1959	140	3,500	26,000
1960	815	20,375	26,000
1961	402	10,050	136,000
Sub-Total	1,917	47,950	485,000

Gurkha soldiers made fully literate -- (est.) 3,000 per year.

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*Source: 1961 Committee Report, Op. Cit., p. 27; British and Indian estimates on Gurkha data.

Table VIII. Government Expenditures (Regular and Developmental) in Nepal, 1952-1961*
(in Rs. 00,000)

		1952-53	1953-54	1954-55	1955-56	1956-57		1957-58		1958-59		1959-60		1960-61	
						am't.	(%)	am't.	(%)	am't.	(%)	am't.	(%)	am't.	(%)
Education	Regular	21.55	19.55	17.88	26.67	23.67		32.56		23.25		50.49		37.91	
	Develop.	ne	ne	9.47	ne	19.79		21.57		25.00		69.11		77.37	
	Total			27.35		43.46	(7)	54.13	(6)	48.25	(5)	119.60	(8)	115.28	(6)
Health	Regular	a	a	a	a	a		a		16.58		17.46		15.53	
	Develop.	ne	ne	ne	ne	23.04		2.81		14.52		64.37		55.30	
	Total									31.10	(3)	81.83	(5)	70.83	(4)
Transport & Communications	Regular	a	a	a	a	a		a		36.06		37.99		57.10	
	Develop.	ne	ne	ne	ne	39.05		29.13		118.71		413.86		348.26	
	Total									154.77	(16)	451.85	(30)	405.36	(22)
Agriculture	Regular	a	a	a	a	a		a		15.25		30.48		16.18	
	Develop.	ne	ne	ne	ne	28.09		33.27		78.10		79.78		116.99	
	Total									93.35	(9)	110.26	(7)	133.17	(7)
Industry	Regular	a	a	a	a	a		a		21.55		30.16		52.00	
	Develop.	ne	ne	ne	ne	15.19		14.46		22.76		35.65		15.50	
	Total									44.31	(5)	65.81	(4)	67.50	(4,
Power & Irrigation	Regular	a	a	a	a	a		a		8.21		14.92		12.83	
	Develop.	ne	ne	ne	ne	14.48		11.15		20.39		92.59		126.06	
	Total									28.60	(3)	107.50	(7)	138.89	(8)
Justice	Total	52.17	34.41	46.33	61.10	65.60	(10)	93.21	(10)	95.33	(10)	99.01	(7)	134.76	(7)
Defense	Total	169.01	100.86	95.13	83.89	95.97	(16)	144.49	(15)	142.82	(14)	145.00	(10)	172.13	(9)
Royal Household	Total	42.25	13.53	56.36	80.64	43.78	(7)	46.92	(5)	48.75	(5)	52.97	(4)	77.57	(4)
Administration	Total	142.11	136.69	103.40	122.24	126.74	(21)	173.79	(18)	176.80	(18)	159.16	(11)	243.21	(13)
Food Grains Purchase	Total	35.39	30.80	9.52	42.99	25.99	(4)	15.37	(2)	17.78	(2)	48.96	(3)	46.71	(3)
Miscellaneous	Regular	111.50	63.39	50.26	90.27	70.60		311.18		56.31		17.21		206.93	
	Develop.	ne	ne	ne	ne	7.48		11.54		47.48		33.92		17.30	
	Total					78.08	(13)	322.72	(34)	103.79	(11)	51.13	(4)	224.23	(12)
Total Regular Expenditure		573.98	399.23	378.88	507.80	452.35		817.52		658.69	(67)	703.81	(47)	1,072.86	(59)
Total Develop. Expenditure		ne	ne	ne	ne	147.12		123.93		326.96	(33)	789.28	(53)	756.78	(41)
Grand Total						599.47	(100)	941.45	(100)	985.65	(100)	1,493.09	(100)	1,829.64	(100)

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[a] Included under "Miscellaneous."

[ne] No estimate.

Table IX. Sources of Foreign Aid in Nepal, 1952-1961*

(in Rs. 00,000)

Name of Country	1952-56[a]	1956-57	1957-58	1958-59	1959-60	1960-61[b]	Total
U.S.A.	24.9	127.53	484.73	179.51	562.25	869.97	2,248.89
India[b]	70.0	145.70	96.05	171.02	184.50	223.55	890.82
USSR	-	-	-	-	-	84.56	84.56
China (Communist)	-	-	-	-	321.35	-	321.35
Great Britain	-	-	-	-	6.73	30.47	37.20
New Zealand	-	-	-	-	11.30	10.00	21.30
Australia	-	-	-	-	-	8.49	8.49
Canada	-	-	-	-	11.25	-	11.25
Switzerland	?	-	-	-	19.72	4.09	23.81
Ford Foundation	?	-	-	-	-	106.55	106.55
U.N.O.	?	-	-	-	136.30	33.31	169.61
TOTAL	94.9	273.23	580.78	350.53	1,253.40	1,370.99	3,923.83

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*Source: Progress Report of the First Five Year Plan. Kathmandu: National Planning Council Secretariat, 1961 (in Nepali), p. 6.

[a] Incomplete.

[b] Estimates only.

Table X. Distribution of Foreign Aid in Nepal, 1956-1961*

Projects	Expenditures for 5-Yr. Period	% of Total
Village Development	266.8	11%
Agriculture and Forestry	69.5	3%
Transport & Communications	949.0	44%
Power	133.5	6%
Industry, Mining, Tourism	103.6	5%
Health	160.0	8%
Education	212.8	10%
Irrigation & Drinking Water	131.2	6%
Miscellaneous	117.7	6%
Total	2,144.1[a]	100%

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*Source: Finance Ministry, HMG, Kathmandu.

[a] This total includes only money spent directly on projects. It does not include administrative costs of the aid agencies themselves or funds spent through the regular budget, as does the total in Table IX.

Table XI. Estimated Total and Unit Costs of Education in Nepal, 1957-1961*

(Operating Costs, from Regular and Developmental Budgets)
(Total Costs in Rs. 000; Unit Costs in Rs.)

	1957-58		1958-59		1959-60		1960-61	
	Total	Unit	Total	Unit	Total	Unit	Total	Unit
Primary Education	1,107	10	1,324	10	1,645	10.6	4,927	27
Normal Schools	356	550	546	960	428	626	629	1,030
Secondary Education	222	12.3	233	12.2	314	15.6	1,082	51.3
College of Education	236	1,168	235	1,263	253	1,421	230	1,314
Higher Education	679	ne	1,100	292	1,043	240	2,956	592
Adult Literacy	106	19.3	140	40	147	7.2	43	4.3
Educational Materials	274	1.9	268	5.3	127	2.9	153	1.1
Administration	424	ne	509	2.9	960	4.4	805	3.7
Total	3,404		4,355		4,917		10,825	

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*Source: Original accounts from the Ministry of Education, HMG, and other reports available to the author. Detailed explanations of the compilations for this table will be found in the footnotes of Tables M, N, and O in Educational Planning in Nepal...Op. Cit.

[ne] No estimate.

Table XII. Types of Early Primary Schools in Nepal*

Type	1951		1954		1959	
	No. Schools	No. Pupils	No. Schools	No. Pupils	No. Schools	No. Pupils
Gompas (Buddhist)	no enumeration;		estimated from 25 to 50 schools			
Sanskrit	310	7,786	233	5,126	191	115,900[a]
Vernacular			667	20,010	487	
English					957	
Basic (Gandhian)	0	0	21	1,050	19	
National Schools	0	0	0	0	538	

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*Source: For 1951 and 1959, Upraity, Op. Cit.; for 1954, Education in Nepal, Op. Cit., p. 36.

[a] Does not include pupils of grades 1-5 from "middle" and "high" schools.

Table XIII. Types of High Schools in Nepal*

Type	1951	1954	1961
English	7	65	146
Sanskrit	2	5	10
Basic (Gandhian)	2	13	0
Total	11	83	156

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*Source: For 1951 and 1954, Education in Nepal, Op. Cit.; for 1961, Office of the DPI, HMG.

Table XIV. Education of Girls in Nepal, 1954 and 1961*

	1954		1961	
	Number of Girl Students	% of Total	Number of Girl Students	% of Total
Primary Grades (1-5)	2,329	4.1%	67,079	37%
Secondary Grades (6-10)	913	6.2%	4,000	19%

---

*Source: For 1954, Education in Nepal, p. 36. (70.4% of the middle school pupils, and 61.5% of the high school pupils have been added to the primary school pupils, as these schools include the primary grades; for 1961, estimates by the Office of the DPI, HMG.

Table XV. Wastage Through Examinations in Nepal, to 1961*

	Prior 1955	1955	1956	1957	1958	1959	1960	1961	Total or Av.
Secondary Examination (SLC)									
No. Taking Exam	5,622	1,388	1,803	2,191	2,571	2,815	3,249	3,664	23,303
No. Failing Exam	2,847	844	1,083	1,187	1,415	1,665	1,989	2,397	13,427
% Failing Exam	51%	61%	60%	54%	55%	59%	61%	65%	58%
Intermediate Examination									
No. Taking Exam	x	344	419	437	465	519	629	1,229	4,042[a]
No. Failing Exam	x	165	226	254	277	322	371	739	2,354[a]
% Failing Exam	x	48%	54%	58%	60%	62%	59%	60%	58%
Baccalaureate Examination									
No. Taking Exam	x	229	200	317	316	344	371	445	2,222[a]
No. Failing Exam	b	126	87	173	179	166	153	201	1,085[a]
% Failing Exam	x	55%	43%	55%	67%	48%	41%	45%	49%

---

*Source: SLC Board, Education Ministry, HMG, and Examination Board, Tribhuwan University.

[x] No data available.

[a] Incomplete total.

[b] It is known that 2,609 passed the examination prior to 1955, but records regarding the number who took the examination are incomplete.

Table XVI. Production of Professional and Instructional Materials in Nepal, 1954-1961*

Year	No. Book and Pamphlet Titles	No. Magazine and Newspaper Issues	No. Charts	Total No. Copies Printed
1954	5		5	30,000
1955	3			2,500
1956	5		4	48,500
1957	12	26	2	137,500
1958	9	42		146,000
1959	8	42		51,000
1960	1	42		44,000
1961	2	16	—	138,000
Totals[a]	45	168	11	597,500

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*Source: Bureau of Publications, College of Education, Kathmandu.

[a] The totals of titles do not include reprints; the total number of pieces printed does include reprints. English and Nepali editions of the same publication have been counted as two titles.

VT 004 956
Wood, Hugh B.
The Development of Education in Nepal. Bulletin 1965, No. 5.

Office of Education (DHEW), Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (FS5.214:14110, $.30).
Pub Date - 65 83p.

*EDUCATIONAL PROGRAMS; HISTORICAL REVIEWS; EDUCATIONAL ADMINISTRATION; BIBLIOGRAPHIES; EDUCATIONAL FINANCE; EDUCATIONAL NEEDS; PRIMARY EDUCATION; SECONDARY EDUCATION; HIGHER EDUCATION; TEACHER EDUCATION; VOCATIONAL EDUCATION; ADULT EDUCATION; NATIONAL DEMOGRAPHY; *NATIONAL PROGRAMS; *FOREIGN COUNTRIES; DEVELOPING NATIONS NEPAL

Education has been accepted as a state responsibility and a fundamental right of each individual in Nepal; however, the expansion of education is limited by the availability of economic resources. Universal 5-year primary education is conceived as basic training on which further education can be built as needed. A 5-year secondary school will offer training in occupational skills and preparation for college and technical schools. A national university will provide professional training. Finally, extensive adult education will complete the total educational program. Nepal has many educational problems all of which can be solved in time with financial assistance. A selected bibliography is included. The appendixes list institutions of higher education, enrollment in educational programs, and educational proposals for Nepal. (WB)

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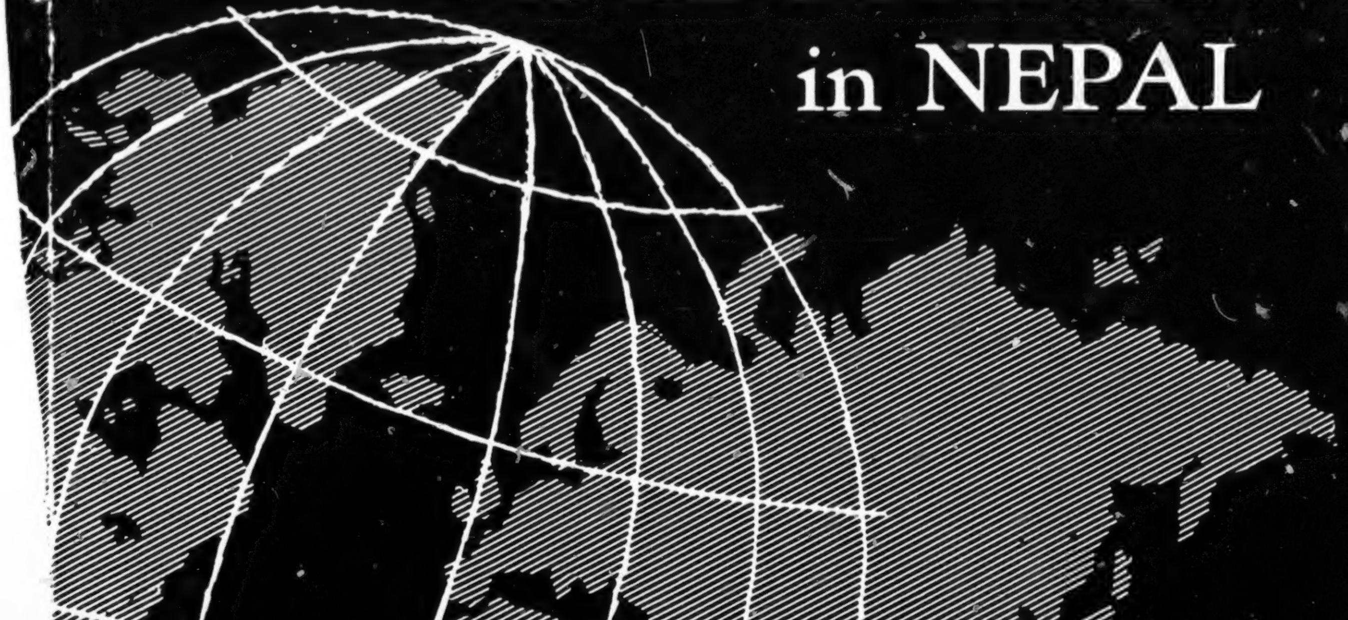
THE DEVELOPMENT of EDUCATION in NEPAL



STUDIES
in COMPARATIVE
EDUCATION

U.S. DEPARTMENT OF
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OE 14110
Bulletin 1965, No. 5

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The DEVELOPMENT of EDUCATION in NEPAL

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HEALTH, EDUCATION, AND WELFARE
Office of Education

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Foreword

This study of educational development in Nepal is written from the vantage point of one who has personally participated, over an extended period, in the program of outside assistance to that country. In its evaluative aspects, therefore, it reflects the perspectives and experiences of the author and does not necessarily represent the views of the Office of Education or any other Federal Government agency. The study is being published under the Office's research program in comparative education, as part of a continuing effort to produce and disseminate information on foreign educational systems.

ROBERT D. BARENDSEN
Specialist in Comparative Education
for Far Eastern Countries

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Acknowledgments

This study could not have been written without the help of many of my colleagues. Foremost among these is Dr. Trailokya Nath Upraity, who served as my immediate counterpart, first as Undersecretary of Education in Nepal, then Principal of the College of Education, and later as my associate at the University of Oregon where he completed his doctor's degree in 1962. I have leaned heavily on parts of his dissertation and his contributions to published and unpublished documents mentioned above. Finally, he read the draft of this manuscript and made numerous helpful suggestions which have been incorporated into it.

To Dr. Bruno Knall of the Kiel University Institute of World Economics, I owe a deep gratitude, first for providing me with new perspectives on the place of education in economic development in Nepal; and second for his cooperation as colleague in the UNESCO survey in 1962 and as co-author of the survey report, on which I have relied for much data on the modern period.

A third major source, and an historical landmark in education in Nepal, is the report of the National Education Planning Commission, which was led by Sardar Rudra Raj Pandey. It was he and his secretary, Kaisher Bahadur, K.C., and the other members of this commission who pioneered the study and promotion of education in Nepal.

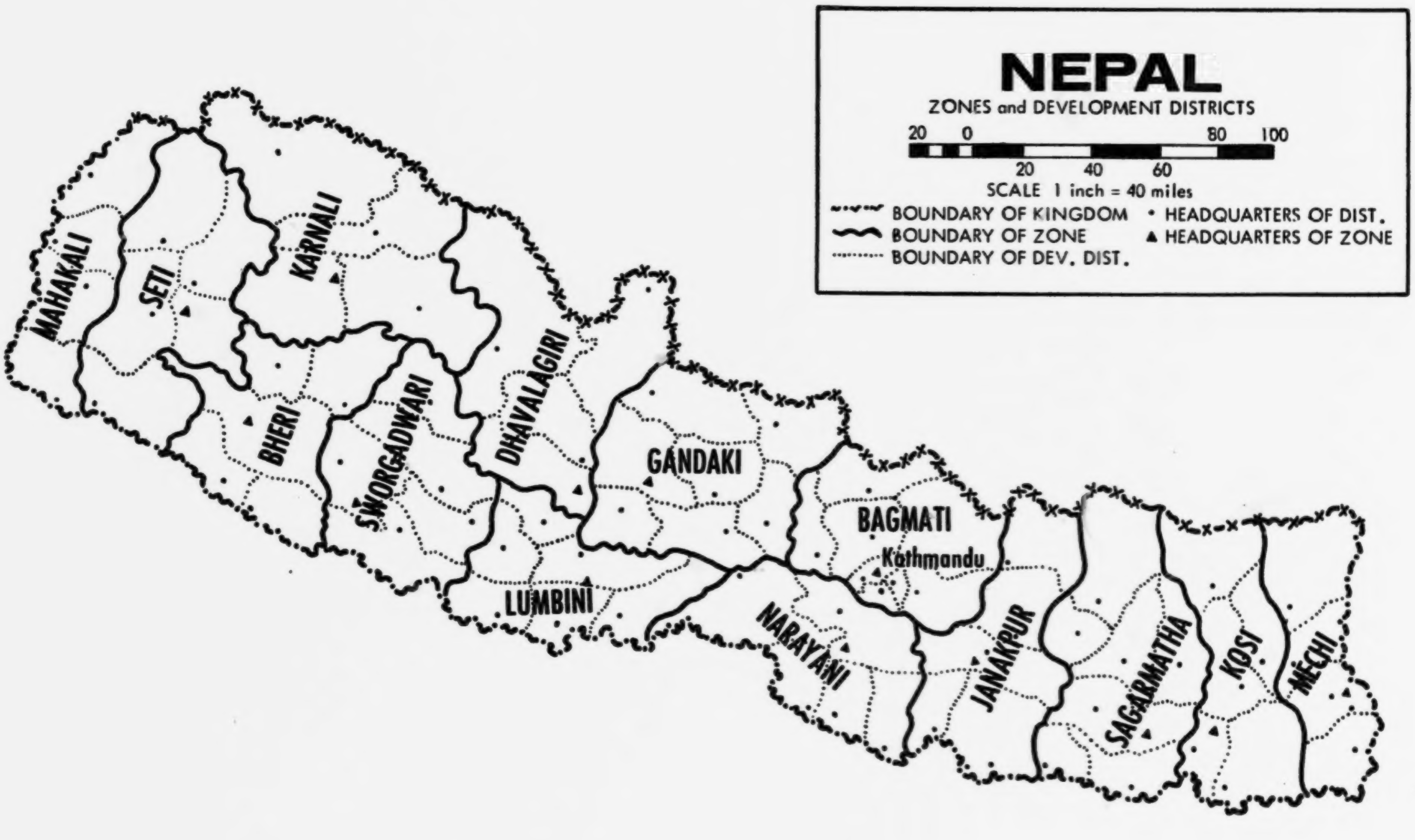
There are many others, some identified in the bibliography, both Nepalese and Americans, who have made major contributions to the development of education in Nepal, and hence to this story, but space does not permit the recital of their names here. To all who have so generously given of their time and interest goes my deepest appreciation.

H. B. W.

Preface

It was my good fortune, in the fall of 1953, to be invited to Nepal to serve as Educational Adviser to the newly created government and to assist in the development of an educational system for that long-sleeping country. My visit lengthened to 6 years as the program unfolded with the help of American technical assistance provided in part through a University of Oregon contract with the International Cooperation Administration. The many challenging experiences of this period were climaxed in 1962 when I was invited to return under a UNESCO grant to assist in a survey of a decade of educational development and an analysis of the role of education in the continuing economic development of Nepal. The story of education in Nepal which follows has been drawn from personal experience and research, from many records and reports heretofore unpublished, and from published documents now available.

HUGH B. WOOD.


NEPAL
ZONES and DEVELOPMENT DISTRICTS
20 0 20 40 60 80 100
SCALE 1 inch = 40 miles
BOUNDARY OF KINGDOM
BOUNDARY OF ZONE
BOUNDARY OF DEV. DIST.
HEADQUARTERS OF DIST.
HEADQUARTERS OF ZONE
MAHAKALI
SETI
KARNALI
BHERI
SWORGADWARI
DHAVALAGIRI
LUMBINI
GANDAKI
BAGMATI
Kathmandu
NARAYANI
JANAKPUR
SAGARMATHA
KOSI
MECHI

I. Introduction

Geographical Setting

Clinging to the southern slopes of the high Himalayas in central Asia lies the little kingdom of Nepal, best known for her famed Ghurkha soldiers and her high mountain peaks.[1] Stretching for about 500 miles in a northwest-southeasterly direction, Nepal provides an 80- to 130-mile wide buffer between India and Tibet.

Nepal comprises about 55,000 square miles. Her northern boundary roughly follows the divide and peaks of the Himalayan range. The eastern and western boundaries are marked by rivers, but the southern boundary fades into the Gangetic plains with few natural features, and almost as few man-made markers.

Although the several mountain ranges in the country tend to run in an east-west direction, this vast watershed is drained by seven major river systems that have cut through the ranges in a general north-south direction, carrying their waters to the Ganges. Several of these rivers cut through the divide into Tibet, thus creating natural trade routes. In fact, these rivers have linked India and Tibet, and have tended to separate the various parts of Nepal; north-south traffic is much easier than east-west traffic. This situation, in turn, has contributed more to the encouragement of loyalties oriented toward India and Tibet than to the development of an indigenous Nepalese nationalism.

Elevations in Nepal vary from about 200 to 29,000 feet. The southern band of 20 to 30 miles, lying south of the Siwalik Range, is part of the Gangetic plains, has a rather even elevation of about 200 feet, and is subtropical in all respects. Much of it is forested, but this Terai area also supplies more than its share of rice. The central and widest band consists of hundreds of valleys, about 2,000 to 5,000 feet in elevation, and of the surrounding ranges and foothills, about 6,000 to 10,000 feet high. Here the climate is temperate; both rice and wheat are staple crops. The northern band of 15 to 20 miles comprises the high Himalayan peaks, 50 of which are over 24,000 feet high, and the tundra area with its arctic climate.

---

[1] A good source for information on the geography of Nepal is Pradyumna P. Karan, *Nepal: A Physical and Cultural Geography.* Lexington: University of Kentucky Press, 1960.

The rainfall varies from 35 to 70 inches per year; 80 percent of it falls during the monsoon period, June to September. The soil in the Terai is generally rich alluvial silt. In the valleys also it often may be silt, but much of the farming in the central band is on terraces that have been cut from the mountain sides, and here the soil may be shallow. It is estimated that only about 15 percent of the tillable land is now under cultivation, but it must be realized that (a) this is probably the best soil; and (b) placing additional land under cultivation would require the clearing of forests and the building of terraces at a tremendous cost of labor.

The intensity of land utilization varies. Primitive forms of irrigation supplement the monsoons in some areas, often making possible three crops per year. Most of the land provides only a single crop, because of the lack of rainfall 9 months of the year or other climatic conditions. Farming methods are primitive and inefficient; it is estimated that rice production is less than one-third as much per acre as in Japan, and wheat perhaps one-seventh as much per acre as in the United States.

The major crop is, of course, rice; wheat and barley are substitute cereals in the colder areas. Potatoes are raised in sufficient quantity for export in some areas; legumes and green vegetables are grown in limited quantities. Fruit is almost nonexistent. Timber, nearly all state owned, has been a valuable resource, but recently the government has taken drastic steps to curtail rash exploitation of the forest reserves, thus limiting income from this source.

For religious reasons, less than half the people eat meat, and those who do can afford little of it. Cattle are never eaten, and the use of cow's milk is limited. Goats and yak provide meat and milk, as well as hides. Poultry and eggs are common food items, but fish is rarely available.

The use of animals as beasts of burden is limited. Elephants are used in lumbering and horses are used occasionally on the trails. Goats and yak serve as work animals, but cattle are not used in this capacity except in the Terai area.

Geological surveys have revealed low-grade deposits of iron ore, some mica, a little coal, and traces of oil and gas, but there is general agreement among geologists that there are no substantial mineral resources in Nepal.

Historical Background

The early history of Nepal is shrouded in darkness. There are conflicting records of dynasties of 3,000 years ago and references to Nepal in stone inscriptions left by early travelers through the country. But there are comparatively few reliable historical records prior to the British period in India.[2]

One may surmise that 3,000–5,000 years ago there were relatively advanced civilizations in various parts of what is today Nepal. Diaries and letters of traveling missionaries and other visitors confirm this for the Kathmandu Valley as early as the sixth and seventh centuries. But modern history in Nepal begins during the 18th century when Prithwi Narayan Shah and his successors succeeded in uniting the country into a political entity. Shah was king of the state of Gorkha, which lies to the west of the Kathmandu Valley, the largest and most advanced area in the foothills. In 25 years (about 1743–68), Shah conquered the Kathmandu Valley and united the central part of what is today Nepal. His successors continued the expansion until Nepal extended to Kashmir on the west, Bhutan on the east, and the Ganges River on the south.

The British put an end to the expansion by the War of 1814–16 and pushed Nepal's boundaries back to the present locations. For the next 30 years there was a constant internecine struggle for political power, until in 1846, following a bloody court massacre, Jang Bahadur Rana seized the prime-ministership, made the royal family virtually prisoners of the palace, and established a dictatorship. He made his office hereditary, and for 104 years he and his heirs ruled Nepal rigidly, closing the borders of the country. Few Nepalese, other than the Ghurka soldiers, were allowed to leave, and less than 50 foreigners (including diplomats) were allowed to enter during the Rana century of reign.

---

[2] Sources for the history of Nepal are numerous. See, for example, Sylvan Levi, *Le Nepal*, Paris: Ernest Leroux, 1905; Francis I. S. Tukor, *Gorkha: The Story of the Gorkhas*, London: Constable, 1957; Girilal Jain, *India Meets China in Nepal*, Bombay: Asia Publishing House, 1962; and also the various writings of D. R. Regmi.

Growing nationalism, freedom movements in India, enlightenment of the Ghurka soldiers who returned to their villages after 20 years of service in India and other parts of the world, and other factors made it possible for King Tribhuvan to overthrow the Ranas and regain political power in 1951.

Then began a decade of royal reign with political party advice. The King, anxious to establish a democratic form of government, encouraged the development of political parties and appointed various advisory bodies and cabinets successively from the several major parties. Popular elections were held in 1959, and the Nepali Congress party took over the reigns of government, but in December, 1960, King Mahendra exercised his constitutional right and seized control of the government to avoid a national crisis. Since then, political parties have been banned, but the King has established two advisory bodies—the National Panchayat, representative of the local panchayats (councils), and the National Guidance Council, representative of various occupational groups.

For many years, about 32 areas have been politically recognizable as principalities or districts. Each has its own governor, and is divided into several sub-areas. But superimposed on this structure today are 75 sub-districts, or "development blocks" (see map), most of which have a political head responsible to the governor of the larger district. Each of these 75 areas has an area panchayat, or council, made up of representatives of the village panchayats; representatives of these 75 panchayats make up the National Panchayat, one of the King's advisory bodies.

Guild-like organization has been encouraged among the farmers, merchants, tradesmen, and professional groups, etc., and representatives of these groups make up the other advisory body to the King, the National Guidance Council.

Demographic Data

Like many other Asian countries, Nepal is experiencing rapid population growth. The population in 1961 was 9.7 million, and was growing at an annual rate of nearly 2 percent.[3] It has doubled since

---

[3] The data used herein are from the Nepal Census. They have been summarized in the report of the 1962 UNESCO Mission to Nepal: Hugh B. Wood and Bruno Knall, "Educational Planning in Nepal and Its Economic Implications." Paris: UNESCO, 1962. (mimeograph).

1920, and will probably double again within 25 years. Something over a million people, who live mostly in the northern areas, are of Tibetan (Mongolian) stock; a similar number, who live mostly along the Indian border, are of Indian (Aryan) stock, speak Hindi as their mother tongue, and follow Indian customs. The remainder of the population are a blend of these two stocks.

The density of population varies from zero in the Tundra regions to 2,100 per square mile in the Kathmandu Valley. The average for Nepal is 178 per square mile. There are only six towns of over 10,000 inhabitants; 85 percent of the 28,770 settlements have fewer each than 500 residents.

As many as perhaps 30 "tribes" may be identified, often by distinct physical (mostly facial) features. Members of these groups may also be distinguished by the pursuance of a common occupation, by the location of their villages (e.g., the Gurungs on hilltops), by the style of their architecture (e.g., the Newar's carved windows), and in other ways. Originally, these various groups could be located geographically, some district names indicating the "tribe" that inhabited the area. But today, while tribal groups may still be associated with geographic areas, increased mobility, especially to larger centers of population, has modified this pattern.

Sometimes this tribal distinction is supported by the caste system; for example, the Gurungs tend to be farmers, but many of them belong to other castes. The caste system operates in Nepal, but not so clearly or so forcefully as it once did in India. Non-Hindu groups (e.g., the immigrating Newars and the Buddhists) have adopted the system, often creating new castes and new hierarchical positions. But except for marriage and, to a lesser extent, certain other ceremonies, there is general social integration.

About two-thirds of the people profess Hinduism, 100,000 are Muslims, and the remainder profess Buddhism. However, Hinduism and Buddhism have been blended in Nepal as in no other country, and numerous deities are worshipped in common by both sects. A Hindu temple is likely to have a Buddhist *chorten* at its base; a Buddhist temple often encompasses Hindu shrines within its compound. Creeds are not dissimilar, and there is rarely friction between the two groups.

Life expectancy is estimated to be only about 35 years, but this is due partly to a high (perhaps 50 percent) mortality at birth and within the first year. One who survives childhood has good chances of living to the age of 60 or 70. Smallpox, malaria, tuberculosis, cholera, typhoid, goiter, and leprosy are common, and are frequently fatal. Improvement of sanitation and reduction of disease probably will become major factors in population increase in the decades ahead. In 1953, Nepal had practically no doctors, only about 300 "compounders," and some midwives. In 1962 there were about 130 doctors, and facilities had been established for training nurses, midwives, and other medical aides.

Economic Conditions

Nepal is predominantly an agricultural country; 93 percent of the economically active population is engaged in farming.[4] Arable land and forests, being the only natural resources available, are the basis for the economy, but soil erosion, unregulated deforestation, lack of irrigation and fertilizers, ignorance of efficient farming methods, and a land tenure system that discourages initiative combine to keep the income from agriculture at a level substantially below its real potential.

Only 2 percent of the economically active population is engaged in "manufacturing," mainly in cottage-type industries. There are only nine factories in Nepal, all relatively small.

For centuries Nepal has had an extensive network of trails. Except when the rivers are swollen during the monsoon period these trails constitute readily accessible, but slow, transportation routes for goods carried on the backs of porters. There are a few roads, including one from the Indian border to Kathmandu, but the total mileage is under 350. An east-west road has been proposed and one from Kathmandu to the Tibetan border is under construction, but the rugged mountainous terrain makes road building extremely expensive. Nepal now has about a dozen landing strips that will accommodate DC–3's and smaller planes, and plans to develop a dozen more. Air transportation may prove to be cheaper than road transportation; it has already displaced porter service in some sections of the country.

These factors all combine to explain the extremely low level of income of the Nepalese people. It has been estimated that the annual per capita income was less than $50 in 1961. Since the high concentration of wealth is in the top income brackets, and the average *cash* income is probably less than $12 per year, it is apparent that the large majority of the Nepalese people live on a marginal basis. It is not surprising, therefore, that these people are provided with a very low level of social services. Under current conditions, expenditures for education, health, and welfare must come from the meagre income of the people or from foreign aid. In the long run, an expansion of these services is dependent upon the successful economic development of the country.

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[4] For information on economic development in Nepal, see Wood and Knall, *op. cit.*, p. 4–24, 110–136.

When King Tribhuvan regained control of the government in 1951, he immediately asked India and the United States for economic development aid. By 1961 the United States had contributed $32,000,000; India, $20,000,000. Other countries and agencies later offered aid in lesser amounts. By 1961 Russia had contributed $1,500,000; Communist China, $6,400,000; the United Nations, $3,400,000; Ford Foundation, $2,100,000; other countries and agencies, $5,000,000. This money, combined with the regular revenue of the government, was distributed (during 1958–61) as follows: education, about 6 percent; health, 4 percent; transport and communication, 22 percent; agriculture and forestry, 7 percent; industry, 4 percent; power and irrigation, 8 percent; justice, 7 percent; defense, 9 percent; administration, 13 percent; other, 20 percent.

To support growing investments in economic development, Nepal has come to rely increasingly heavily on foreign aid. In 1958–59 the internal contribution to the development budget was 29 percent; in 1959–60, 13 percent; and in 1960–61, only 6 percent. It is perhaps too early to determine whether this large investment in economic development will "pay off" or not, but some of the "returns" thus far in education will be noted later.

II. History of Education in Nepal

Early Developments

It is not surprising that the earliest forms of education in Nepal were associated with the two major religions, Hinduism and Buddhism.[5] By the beginning of the Christian era, there were established systems and institutions for the training of priests and other personnel to propagate these religions. The Buddhist Gompas (monasteries) in some ways approached secular education in the breadth of their curricular offerings and in their effort to enroll one boy from each family, whether he was to become a priest or not. The Hindu system placed greater emphasis on the specific training of priests.

Early Chinese and Tibetan documents indicate that Nepalese scholars were well versed in astronomy, geography, literature, and Sanskrit, and the arts and crafts were well developed. The term *guru*, meaning teacher, appears frequently, and many of the rajas of the various principalities had "spiritual directors" to guide the education as well as spiritual life of the people. Many scholars from China and India migrated to the monasteries of Nepal, and Nepalese royalty began to journey to neighboring lands, thus providing the basis for an exchange of learning.

Paralleling this rather academic type of education was a more practical kind that flourished after the 14th century, when the prevailing caste system was reorganized and strengthened by King Jayathiti Malla. He encouraged greater emphasis on occupational training (since each child was preordained to follow his father's caste occupation), and the apprenticeship system was widely used. Guilds were organized which, among other things, looked after the education of youth.

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[5] For an account of the history of education in Nepal up to 1951, see Trailokya Nath Upraity, "Historical Background of Educational Development in Nepal," in *Financing Elementary Education in Nepal*. Eugene, Oreg.: The American-Nepal Education Foundation, 1962, p. 18–70.

During the 7th, and again in the 18th centuries, Christian missionaries twice attempted to establish schools in the Kathmandu Valley, but these efforts were short-lived and limited in scope.

Prithwi Narayah Shah, as might have been expected, introduced a martial note in education, believing every youth should be trained for war, but after he had conquered the Kathmandu Valley, he laid heavy stress on the industrial and vocational development of the country. He introduced a new concept of state responsibility for education by providing for the education of the children of soldiers lost in battle. However, he and his heirs did not hesitate to appropriate the accumulated wealth of ancient educational institutions to pay the costs of conquest, and both Buddhist and Hindu education often suffered as a result.

A Period of Opposition to Education

The Rana period, 1846–1950, is best described as one of general opposition to education by the ruling group. In an era when western countries were developing and extending their systems of learning, the Ranas were attempting to remove nearly all vestiges of education in Nepal. Although they imported British or Indian pundits to teach their own children according to the English system, they thoroughly opposed education for the masses. In fact, anyone advocating it risked the death penalty or the dungeon.

Jang Bahadur, the first of the Ranas, organized a British-type school for his own children in 1854. His successor, Ranadip, moved the school (known since then as Durbar High School) from the palace to its present site and opened it to other Rana children. He promptly introduced Sanskrit and thus laid the foundation for the later establishment of Sanskrit schools. For the next half century there were no further developments; in fact, various government policies and actions resulted in the serious deterioration of the ancient forms of education.

It was inevitable that some of the Ranas would become enlightened as they pursued their studies, occasionally in India at the university level. One such was Deva Shumshere Rana who succeeded to the prime-ministership in 1901. Having seen the effects of the development of education in India, immediately upon assuming office he provided free vernacular schools in every village with 50 pupils or more, to teach the "3 R's" and history and geography. He also established a newspaper and laid plans to free the country's slaves (indentured Nepalis, usually of low caste). It is remarkable that 150 schools were actually opened before he was exiled by his brothers after 113 days in office. The newspaper and the schools were promptly closed, and the concept of universal education was suppressed for 50 years.

During this 50-year period only two events of educational significance occurred. First, Chandra Shumshere Rana became dissatisfied with the universities of India and their influence on the young Rana heirs, so he established Tri-Chandra College in Kathmandu, with attendance limited to the Ranas and children of a few favored courtiers. (It is interesting to note that he gave recognition to the young King Tribhuvan by including part of his name in the title of the college, perhaps suggesting a changing relationship between the palace and the dictators.) The second event occurred in 1932 with the establishment of a board to supervise the standards of the secondary school examination.

Toward the end of the Rana period another enlightened ruler came into power, Padma Shumshere Rana. Of like mind with Deva, he provided for the establishment of schools, the training of teachers, and the publication of textbooks, but, most important, he decreed a constitution which recognized the right of each child to an education. As was the case with Deva, Padma was forced into exile and his reforms were abolished. His successor, and last of the Ranas, Mohan Shumshere, however, could not overcome the rising demands of the people for decency, education, and their fundamental rights, and was overthrown in 1951.

The Modern Period

The impetus given to education by Padma, the initiative of the villagers along the Indian border in establishing their own schools, and the general freedom movement combined to provide a tremendous force for the rapid expansion of education immediately after 1951.[6] Many schools were opened quickly, often without adequate planning, financing, or facilities. Nearly all of them charged tuition and catered to the more favored socioeconomi cclasses.

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[6] Two documents provide the basic sources for the record of developments since 1951: Rudra Raj Pandey, Kaishur Bahadur, and Hugh B. Wood, eds., *Education in Nepal: Report of the National Education Planning Commission.* Kathmandu: Bureau of Publications, College of Education, 1956; and Wood and Knall, *op. cit.*

To prevent complete chaos and provide some guidance for educational development, several organizational steps were taken. These included creation of an educational ministry, strengthening the educational directorate, and appointment of seven school inspectors. A Board of Education was appointed, and in 1954–55, a National Education Planning Commission mapped out a long-range plan for the orderly development of education in Nepal. With the help of American aid, primary schools were expanded, a teacher-training program was established, adult literacy classes were opened, and provision was made for the preparation and printing of textbooks. Colleges were established, both in the Kathmandu Valley and in the hinterlands, and a national university was organized. In 1962, a UNESCO team made a comprehensive survey of a decade of educational progress in Nepal and made recommendations for continued development, but with great emphasis on educational planning.

The description of education in Nepal today, which follows, includes the details of events after 1951, and thus they are not more fully developed here. At this point it is sufficient to note that 1951 marked the beginning of a new dynamic period in the development of education in Nepal—a period which is still continuing.

III. Administration and Supervision of Education

General Organization

Before 1951 there was little need in Nepal for administrative facilities for education. From 1858 to 1951, one of the Rana army generals was designated Director of Education, but the responsibilities relating to this assignment were minimal, and the functions of the office were indifferently performed. Although a sincere effort has been made since 1951 to develop effective administration and supervision of education in Nepal, the lack of experience and training, and the phenomenal growth of education during the period, have made it impossible to close all of the gaps in organization and correct all of the deficiencies in performance. These will be pointed out as the present organization is described. Chart 1 provides an outline of the system.

The Ministry of Education

King Tribhuvan established the Ministry of Education in 1951, when he created his first cabinet after gaining control of the government.[7] The Minister's position is political; he serves at the pleasure of the King. Unfortunately, however, as in some other countries, education has not yet won sufficient recognition to merit a full-time Minister; the various ministers of education have held from one to four other portfolios while attempting to provide leadership for educational development. An attempt has been made recently to correct this situation by the appointment of a deputy minister for education.

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[7] The history and organization of the Ministry of Education are treated in Randhir Subba, Trailokya Nath Upraity, and Hugh B. Wood, "Report on the Ministry of Education," *Education Quarterly*, vol. 2, p. 123–32. A brief description may be found in "Kingdom of Nepal," in Kathryn G. Heath, *Ministries of Education: Their Functions and Organization*. Washington, D.C.: U.S. Government Printing Office, 1962, p. 443–51.

The Ministry is responsible for all matters pertaining to education. In actual practice, the University Senate has attained a considerable degree of autonomy in the area of higher education, and other ministries direct technical training in their respective fields (e.g., the Health Ministry supervises the training of nurses). But the Minister of Education is responsible for coordinating these activities, providing general educational leadership, establishing broad policies, developing the general program (including the budget), and coordinating educational development with other facets of national economic development through the National Education Planning Council. How well the Minister performs these functions depends in no small measure on his relative interest in education as compared with his other portfolios.

The Secretariat

Immediately under the Ministry is a Secretary of Education, who is appointed by the King.[8] He does not necessarily change with a new Minister, and thus brings more continuity to top-level administration, particularly educational planning. The secretaries since 1951, though not professionally trained, have usually had experience in education and a sincere interest in their responsibilities.

The Secretary is assisted by several under-secretaries whose assignments have varied. Generally, they have been assigned their responsibilities by level of schooling (elementary, secondary, higher education), and occasionally, by the type of school (e.g., Sanskrit schools). For several years, one under-secretary served as director of teacher education and principal of the College of Education. For some time, one under-secretary was assigned to coordinate that part of the program partially supported by foreign aid. This position has also been filled at other times by the Secretary himself or, more recently, by the Director of Public Instruction.

It should be remembered that the Ministry and Secretariat are of recent origin; the Directorate (described below) had been in existence for nearly a century when they were established. As a result, the relationships, as shown in chart 1, did not really come into full operation until the end of 1960; before that, the Directorate operated somewhat independently of the Ministry and Secretariat. As an example of this, prior to 1959 the jointly supported development program (foreign funds and Nepal government funds) was coordinated by the Secretary's office, while the regular program was under the Directorate; as a result, there were, in effect, two educational programs, administered and supervised by different offices. This situation was corrected when the Director of Public Instruction became the coordinator of the joint program. Today, the several offices operate in close harmony.

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[8] The discussion of the Secretariat, the Directorate, the Inspectorate, and local organization, which follows, is based primarily on Pandey, Bahadur, and Wood, *op. cit.*, p. 189–96; and Wood and Knall, *op. cit.*, p. 79–84.

The Directorate

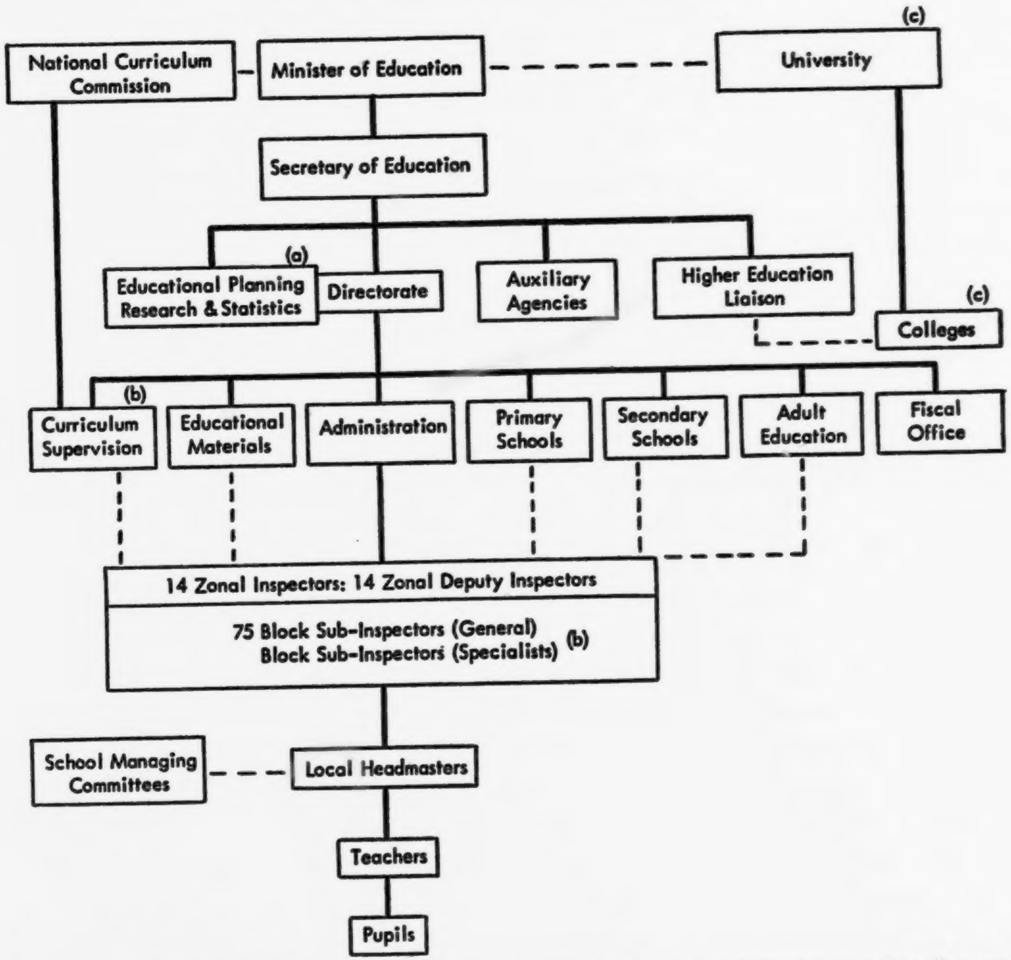
For nearly a century (1858–1951) the Directorate was the only administrative agency for education. There were few schools to administer, but from 1932 on, with the establishment of a "School Leaving Certificate" (S.L.C.) examining board, various functions and responsibilities were added to this office: setting standards, supervision of Tri-Chandra College, keeping records, opening new schools (especially under Padma Shumshere Rana), issuing financial grants to government operated schools (a few were opened gradually during the 1940's), establishing and financing teacher education (a small beginning was made in 1947), publishing materials in Nepali, and similar activities essential to the development of education. The Rana leaders continued to ignore the importance of professionalizing the office, and by 1951 the actual services rendered by the Directorate fell considerably short of those demanded by the "education explosion" about to take place.

The Director of Public Instruction and his several assistant directors today are responsible for the immediate administration and supervision of all elementary and secondary education throughout the country. The Directorate's responsibilities are concerned with the day-to-day operation of the schools, the organization of new schools, the distribution of funds, the preparation and distribution of learning materials, adult education, and other executive aspects of educational administration. Inasmuch as the control of education in Nepal is highly centralized, the functions of this office are similar to those of an American city superintendency, or a highly centralized county superintendency, rather than those of the United States Office of Education or most State departments of education.

Chart I

ORGANIZATION OF ADMINISTRATION AND SUPERVISION OF EDUCATION IN NEPAL

(with Recommended Modifications)


National Curriculum Commission
Minister of Education
(c)
University
Secretary of Education
(a)
Educational Planning Research & Statistics
Directorate
Auxiliary Agencies
Higher Education Liaison
(c)
Colleges
(b)
Curriculum Supervision
Educational Materials
Administration
Primary Schools
Secondary Schools
Adult Education
Fiscal Office
14 Zonal Inspectors: 14 Zonal Deputy Inspectors
75 Block Sub-Inspectors (General)
Block Sub-Inspectors (Specialists) (b)
School Managing Committees
Local Headmasters
Teachers
Pupils

(NOTE.—Solid lines indicate lines of authority; broken lines indicate coordinating and advisory relationships.)

(a) Change recommended by the UNESCO team in 1962.

(b) Addition recommended by the UNESCO team in 1962.

(c) Higher education is academically autonomous but largely dependent upon the Ministry for financial support.

Source: Wood and Knall, op. cit.

Since 1951, the office of Director has been filled by men with educational experience; some have also had professional training. They operate under a School Code which was prepared in 1953 and has been revised as necessary. Much of their work is carried out through the school inspectors.

The Inspectorate

Immediately responsible to the Directorate is a group of inspectors. They have considerable administrative authority over the local schools (e.g., they can open and close schools, approve or disapprove grants, recommend hiring or dismissal of the headmaster and teachers), but every effort is being made to emphasize their supervisory, or improvement-of-instruction and leadership roles.

In 1953, the country was divided into seven zones for purposes of educational administration, and one inspector was appointed for each zone. In 1960, 36 subinspectors were added. Today, the country has 14 general economic development zones and 75 "blocks" (see frontispiece), with an inspector and deputy inspector for each zone, and one or more subinspectors for each block. Although most of these inspectors are college graduates, both preservice and continuous inservice professional training is provided for them by the College of Education. Their key role is recognized and they are given a major responsibility in the development of education.

The Inspectorate provides the link between the Ministry and the local schools, some of which are nearly 30 days by trail from the capital. Wireless telephones now connect the capital with the zonal headquarters. Thus the block subinspector becomes the actual contact with the schools. He travels on foot, and may require 3 or 4 days to reach some of his schools. It is obvious that these primative travel conditions create not only problems in supervision, but in educating teachers, distributing educational materials, getting monthly pay to teachers, and performing other administrative tasks.

Until now, the inspectors and subinspectors have been primarily concerned with their administrative role; there has been too little time and too few personnel to develop and supervise the actual school program. To correct this and to place greater emphasis on the development of an effective curriculum, sound teaching procedures, and adequate learning materials, the UNESCO team in 1962 strongly recommended the expansion of the Inspectorate to eventually include 75 special supervisors in each of the major subject areas. The local schools are generally too small to justify local supervision or extensive administration; the inspectorate system will need to assist in this function and thus to expand to include curriculum supervision.

Local Organization

The local school, if large enough, has a head teacher or a headmaster. For most schools there is an advisory or administrative body, usually called the School Managing Committee. This may be a self-perpetuating body, or may be appointed by the school staff if the school is privately founded. If the school has been established by the village elders or the panchayat, then the founding group may appoint a managing committee, or serve in that capacity itself. The School Managing Committee rarely has the power of an American school board. It may help to raise money, approve new courses, discuss policies, and in other ways take an interest in the school and give it moral support. It may contact the Inspector to obtain new teachers or financial aid, or to secure government land for a new school site, but it has limited authority and administrative responsibility.

The headmaster or head teacher, often a person with limited training, directs the daily operation of the school: he employs teachers (usually recommended or approved by the inspector); assigns teachers to classes; admits pupils; collects tuition fees if charged; keeps in contact with the managing committee and inspector; opens and oversees village libraries; organizes adult literacy classes; works with parents, and in general keeps the school running.

In the past, and to some extent at the present time, because of the limited number of inspectors, the Village Development Worker (similar to the U.S. County Agent) has assisted in the establishment of schools. In the future, the Panchayat Secretary (a trained representative of the central government) may serve in this role. Local initiative is encouraged but often needs to be "sparked." It is hoped that some administrative functions can be absorbed by the local authorities, but general administration and supervision will probably remain highly centralized.

It has been proposed that the local panchayats be given authority to operate the primary schools at the local level. This would include the power to levy a local "cess" or tax for school support. In three districts (Jhapa, Palpa, and Morang) this authority has been granted on an exprimental basis and special efforts are under way to develop free, universal, compulsory primary education as rapidly as possible.

Planning for Education

Educational planning in Nepal has been more thorough and effective than in most developing countries, but continuous planning machinery is still inadequate. In 1953, the Minister of Education appointed a National Education Board, but the board never functioned except to recommend the appointment of a National Education Planning Commission.

This Commission of 56 members, widely representative of Nepalese leadership, worked intensively for a year (1954–55) and drafted a long-range, comprehensive plan of education for Nepal.[9] Among its goals were: universal primary education by 1985; availability of adult education to all who desired it by 1965; a national university by 1965; and availability of multi-purpose secondary education on the basis of one school for every 10,000 inhabitants by 1975. Details were spelled out for education at the primary, secondary, university, technical and adult levels; for teacher training, and development of instructional materials; administration and supervision, and financing of education. The report of this Commission has provided the basis for all subsequent educational planning, including the education sectors of the Five-Year Plan (1956–61) [10] and the Three-Year Plan (1962–65) for economic development in Nepal, as well as the plans submitted to UNESCO for participation in the Asian education project. Furthermore, various agencies have evaluated their progress in terms of the report's proposals and recommendations.

However, time and available personnel have not been adequate to implement all of the recommendations of the Commission. One of its pleas was for *continuous* planning of education at the national level. The National Board of Education was suggested as the vehicle, and various national commissions of this board were to be appointed, especially for curriculum development and for educational research. These suggestions have not yet been implemented, and educational planning today tends to be sporadic, sometimes opportunistic, and occasionally nonexistent. Much of the planning and administration of education is carried out on the basis of day-to-day operational decisions by staff officers without the benefit of advising and policy-making bodies.

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[9] Pandey, Bahadur, and Wood, *op. cit.*

[10] *The Five-Year Plan for Education in Nepal.* Kathmandu: Bureau of Publications, College of Education, 1957.

With the establishment in 1954 of a project to develop teacher education and higher education, utilizing American financial aid and the advisory services of University of Oregon contract personnel, a special committee was appointed to serve in a capacity similar to that normally expected of a board of education in the United States. The arrangement was effective and served as a model, but it benefited only a small segment of the total educational program, and was discontinued in 1959 at the close of the Oregon contract.

The UNESCO team in 1962 called attention to the lack of machinery for educational planning and made several recommendations to strengthen the organization and administration of education in this respect. It recommended:

1. the restoration of the national board of education, to be concerned with total educational planning
2. the establishment of a National Curriculum Commission to "mold the general policies underlying the curriculum of the nation's schools"
3. the development of a curriculum supervisory service to implement the work of the National Curriculum Commission
4. the establishment of a division of Educational Planning, Research and Statistics to collect data and conduct research essential to educational planning (see chart 1).[11]

The following year, a Planning and Statistics Section was established in the Department of Education.

Prior to 1963, there had been no comprehensive, systematic, and uniform collection and interpretation of educational statistics in Nepal. The National Educational Planning Commission collected many of the statistics in its report and compiled others from raw data on hand in the Directorate. The UNESCO team utilized raw data available in the Directorate in its report in 1962, and called attention to this lack of organized data so essential to planning. Almost no educational research has been conducted, except in the Bureau of Educational Research at the College of Education.

One of the major difficulties in educational planning arises from the heavy reliance on foreign aid. No matter how comprehensive the planning may be, most aid-giving agencies tend to insist that their contributions be applied to certain projects. Some aid-giving agencies compete for "recognition-type" participation, that is, for projects which are readily identifiable with the donor. The frequent result is imbalance in the program.

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[11] Wood and Knall, *op. cit.*, pp. 79–84.

To further complicate this problem, other ministries may be more (or less) successful in obtaining support funds than the Education Ministry. This may cause imbalance in education as related to other sectors of the economy, and in training programs under the various ministries. This situation can be corrected only when aid-giving agencies cooperate with the National Planning Council in promoting a comprehensive plan for total economic development. Balance in overall development as well as within the education sector is essential to maximum productivity.

Finally, imbalance in the use of foreign aid and the lack of planning have resulted in limited coordination of the training programs of the various ministries and the Ministry of Education.

In summary, educational administration, supervision, and planning in Nepal at the present time are somewhat volatile, but the foundations for their development have been laid. Tremendous gains have taken place since 1951 and sincere efforts are being made to close the gaps and perfect the functioning of these aspects of education in Nepal.

IV. Financing Education

Types of Support

The early indigenous educational institutions in Nepal were supported by the religious groups that sponsored them. They were generally free of tuition and other charges, but the students often were expected to perform manual labor and participate in communal life to help support the institutions.

The Rana schools, both the English and later the Sanskrit, were state supported, although there was little distinction between personal and state funds among the Rana rulers, and were generally free to those who were permitted to attend. Even Tri-Chandra College had no tuition charges.

Towards the end of the Rana era, some of the people of the Terai area, along the Indian border, brought in teachers from India and, in defiance of the Ranas, opened schools for their children. The teachers were paid mostly in kind—rice, clothing, et cetera—which they collected every Saturday from their patrons (hence, the schools were called "Saturday Schools"). Immediately after the overthrow of the Ranas, scores of schools were opened by educated individuals and by formal and informal groups. The new government, to encourage such groups, soon began making annual grants of Rs. 300 ($42) for primary schools, regardless of size, and Rs. 600 for high schools.[12] Much of the state aid to education today is still given on this basis rather than on a "per-pupil" basis. As these funds were inadequate, additional support came from small tuition fees, local gifts of cash, land, labor, and goods and free services offered by teachers.

Today, there are three types of financial support for schools in Nepal.[13] First, the government continues to fully finance the earlier free state-supported schools, has opened a few additional ones, and is contemplating the establishment of at least one free government high school in each of the 75 development blocks.

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[12] The term "high school" is used in Nepal to designate a school that has both primary and secondary grades.

[13] Basic overall sources for information concerning the contemporary status of educational finance in Nepal are Upraity, *op. cit.*, and Wood and Knall, *op. cit.*

Second, most of the schools are partially supported by the government through grants-in-aid. These schools charge small tuition fees, the maximums being set by the government as a condition for receiving financial aid. The maximum for high school is Rs. 6 per month (4 days' pay for a janitor, 1½ days' pay for a trail porter). For the first two grades, the maximum is Rs. 0.5 per month. Most of these schools require additional local support.

Third, many new schools are opened through private initiative in hope of government aid after 2 or 3 years of successful operation. These schools sometimes hold their tuition charges to the government maximum; sometimes they are substantially higher. Obviously, the schools rely heavily on private support.

There are also a few missionary schools, mostly in the Kathmandu Valley, that intend to remain private in financial support. These charge as much as Rs. 30 per month or more for tuition, but usually provide a few scholarships for children from economically disadvantaged homes.

The various colleges also fall into these three categories described above. The College of Education and Tri-Chandra College receive full support from the government. The university receives substantial state support, but charges tuition and has received private funds for both operating and capital expenditures. Most of the colleges are on a grant-in-aid basis or are privately supported.

Sources of Revenue

Local vs. Central Financing

Traditionally, financing of all government functions has been highly centralized. Under the Ranas, all revenue was channeled to Kathmandu and was then returned to the districts only as needed (and this need was meagerly defined). With extremely limited resources, a subsistence level of living, centralized administration, and a tradition of heavy reliance on the central government for action, it is not surprising that villages have assumed that education would be supported from Kathmandu.

To introduce a new concept, one of "cooperative financing," provision was made for partial local support of the primary schools which were established under joint Nepal-American aid. For the first year, two-thirds of the support was to come from the central government, one-third from the community; the second year the ratio was to be 60–40; then 50–50, 40–60, 30–70. So much difficulty was experienced in getting *any* local support that the plan was abandoned.

However, current plans for educational development provide for increasing community support through taxation. State and foreign aid funds are wholly inadequate for financing education on the scale of expansion planned. The present tax structure is feudal and archaic; first steps have been taken to revise it. When it has been properly overhauled, then local government sources of revenue for education can be utilized. General improvement in economic conditions will also help.

The UNESCO team recommended that the central government provide minimum educational facilities throughout the country—primary, secondary, technical, adult, and higher schools. Facilities for additional children, if there was sufficient demand, could then be financed entirely locally or with "incentive" aid from the central government.

Central Government Resources

The major internal source of revenue for the central government traditionally has been the land, but since 1957 the income from customs and excise duties has exceeded land revenue. Increasing amounts are being realized from the forests, and trade and other domestic activities account for the remainder of revenue. In 1962, the income was divided as follows: from customs and excise, 45 percent; land revenue, 24 percent; forests, 15 percent; trade, 6 percent; other, 10 percent. There is no substantial income from manufacturing or the exploitation of other natural resources.[14]

Since 1952, the major funds for economic development have come from foreign aid; in 1961 only 6 percent came from the Nepal government. The ratio of development expenditures to the regular operating budget has risen sharply since 1959. From 1956 to 1959, the development budget was about 40 percent of the total budget; since then it has been nearly 60 percent.[15]

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[14] Wood and Knall, *op. cit.*, p. 19.

[15] *Ibid.*, p. 122.

None of the internal revenue is "earmarked" for any specific purpose; all activities must compete for operating funds. Foreign aid development money is usually granted for specific projects, and rarely can be transferred if some projects do not materialize and others move ahead more rapidly than expected. Education must compete with other activities for development money; as suggested previously, it is handicapped by the fact that the returns on the investment in general education are usually delayed for a generation and are not as obvious as those for factories, roads, and other "ready-return" investments.

Local Resources

Under recent incentive measures, the local district can withhold up to 10 percent of the land revenue for local developmental purposes, including new schools, and government land is often made available for school sites. But there is no other local government revenue. Any additional local support for education must come from private sources.

Costs of Education

Nepal is at present spending less than 0.3 percent of its national income on education, which is extremely low, even for underdeveloped countries; India, for example, spends 1.5 percent. About 6 percent of the total government expenditures are directed to education, as compared with 15 percent in the United States, but about 10 percent of the development funds have been allocated to education since 1956. During the first Five-Year Plan (1956–61) education was the only sector to utilize its entire development budget; by transfers to the education funds, 112 percent of the original budget was spent on educational development (other sectors used about 50 percent of their budgets). This suggests both achievement and good planning. But it may readily be seen that both the ratio of education expenditure to gross national product (GNP) and the total amount of funds devoted to education must increase sharply if there is to be continued progress in education.[16]

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[16] *Ibid.*, p. 100–110.

Unit Costs

The lack of statistical data makes it difficult to determine unit costs with any high degree of accuracy. In 1954, the National Education Planning Commission, in estimating the future costs of education, used the following annual unit costs: primary schooling, Rs. 40 per pupil;[17] secondary, Rs. 150; university, Rs. 400; teacher training, Rs. 500; textbooks, Rs. 2 each.[18]

The first Five-Year Plan used an annual unit cost of Rs. 30 for primary education; the U.S. aid program used Rs. 37 in a report issued in 1957. The UNESCO Karachi Plan allowed Rs. 150 in calculating the annual cost of primary education to 1980, but later revised its estimates downward.[19] The Secretary of Education, Kulashekar Sharma, in reporting to the UNESCO Tokyo conference in 1962, used $8 or Rs. 56 in estimating the annual costs of primary education to 1960; and $125 or Rs. 875 as the projected unit cost for normal school training. Upraity made perhaps the most careful estimates of unit costs for primary education and found annual *government* costs from 1951–61 to fall between Rs. 14 and Rs. 35, for an average of Rs. 24. In his estimates of future costs, he used Rs. 30.[20]

In 1962, the UNESCO team had the benefit of additional data and experience and arrived at the following estimates, which include both government and local costs: primary education, per pupil, annually, Rs. 30; teacher education (normal school), Rs. 800; secondary education, Rs. 100; teacher education (college), Rs. 900; university, Rs. 900; adult literacy, Rs. 10; textbooks, each, Rs. 2; administration, per pupil, Rs. 4.[21] These estimates were based on averages of government expenditures from 1957–61 and careful estimates of local costs; they are probably the most accurate available. However, the UNESCO team used them as a basis for projection for only 3 years, to 1965. It is readily assumed that unit costs will rise still more after 1965, due to probable inflation and marked increase in the quality of service.

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[17] Actual costs in 1954 were estimated to be Rs. 23; Rs. 40 was used to allow for increasing costs. Other estimates were also above the estimated costs in 1954. One rupee (Rs. 1) equals 14¢ U.S.

[18] Pandey, Bahadur, and Wood, *op. cit.*, p. 201.

[19] *A Working Plan for the Provision of Universal, Compulsory, and Free Primary Education in Nepal.* Paris: UNESCO, 1961, p. 14.

[20] Upraity, *op. cit.*, p. 137.

[21] Wood and Knall, *op. cit.*, p. 105.

Total Costs

The total costs of education depend, of course, upon the extent of education. The total Nepalese government expenditures on education in 1951 have been estimated at Rs. 650,000; in 1954, Rs. 2,735,000; in 1961, Rs. 10,825,000.[22] This compares with total enrollments of 10,455 in 1951, 73,750 in 1954, and 221,360 in 1961.

By 1961, half of the education funds were being devoted to primary education, 10 percent to secondary schools, 30 percent to higher education, and the remainder to teacher education, administration and other costs. Nearly 16 percent of the children of primary school age were in school; 2 percent of the secondary age group were enrolled; and 0.7 percent of the college age group were attending institutions of higher learning.[23]

The UNESCO team recommended continuation of the present rate of growth in primary education, sharp acceleration in secondary education, actual reduction of enrollment in higher education, and considerable increases in adult education, technical training, and supervisory expenditures. To finance these recommendations, it suggested total government expenditures for 1963–65 of Rs. 15,055,000, Rs. 17,825,000, and Rs. 20,015,000 respectively, to be augmented by local expenditures of Rs. 4,080,000, Rs. 6,365,000, and Rs. 8,355,000 respectively.[24] These were considered to be modest but minimal increases, within Nepal's resources, but essential to continued educational development. The UNESCO team made no cost estimates beyond 1965.

UNESCO's Karachi Plan assumes universal primary education in all Asian countries by 1980. Under this plan, primary education in Nepal is expected to cost Rs. 31,518,000 in 1965, and Rs. 293,674,000 in 1980.[25] As indicated above, these estimates and their downward revisions are probably much too high. Sharma estimated the costs of primary education, including administration and teacher education, to be Rs. 20,160,000 for 1965, and Rs. 111,622,000 for 1980.[26] Upraity reviewed the costs of several proposals for primary education, but made no estimates of his own.

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[22] *Ibid.*, p. 27.

[23] *Ibid.*

[24] *Ibid.*, p. 107.

[25] *A Working Plan for the Provision of Universal, Compulsory, and Free Primary Education in Nepal*, p. 21.

[26] [Kulashekar Sharma], *Primary Education in Nepal.* Kathmandu: Ministry of Education, His Majesty's Government, 1962. p. 7.

Administration of Educational Finance

Financial planning is a function of the Director of Public Instruction, the Secretary of Education, and the Ministry. Until 1956, planning was on a year-to-year basis, but with the inauguration of general economic planning, it has been possible to project budgets for 3 to 5 years. As indicated previously, there is a shortage of funds, and education is on a competitive basis with other sectors of the economy. However, within the total education budget, allocations to the various sectors of education are left to the education officials, who have generally followed the recommendations of the National Education Planning Commission. Although prior to 1959 the general budget was completed too late each year to use as a basis for planning, there has been an education budget (based sometimes on "guesses") since 1954. This now serves as an effective device for planning and administering educational finance.

Since 1954, there have been two separate offices, one for the regular budget and one for the development budget. The UNESCO team in 1962 recommended their fusion, and the modernization of accounting procedures.

V. Primary Education

Types of Schools

Primary education in Nepal today reflects several vestiges of the unique historical development of education in that country.[27] For the most part, the several types of primary education that exist today are borrowed from Nepal's neighbors. None of the forms are truly or completely indigenous, and only the curriculum suggested by the National Education Planning Commission has been really designed to fit the needs of all Nepalese boys and girls. As a result of various historical forces and events, Nepal has had six distinct types of primary education.

The Gompas

The oldest form of primary education is what remains of the Buddhist Gompa. It is estimated that from 25 to 50 such schools still exist along the northern borders of Nepal. An effort is made to enroll at least one boy from each family in these predominantly Buddhist villages, and to keep him in school for at least 2 or 3 years. Most of these schools provide facilities for room and board, and life in them is somewhat monastic. The majority of these institutions provide continued training for those who wish to become monks. They are more or less ungraded in organization.[28]

The curriculum is designed primarily for training religious leaders, or prayer-readers, and to a lesser extent for the practical needs of everyday life. Much of the time is devoted to the reading of Buddhist texts, but vocal music and painting are also stressed—music to improve the reading of prayers, and painting to enhance manuscript copying.

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[27] Basic sources for material on primary education in Nepal are Pandey, Bahadur, and Wood, *op. cit.*, Upraity, *op. cit.*, and Wood and Knall, *op. cit.*

[28] For a brief description of the daily routine, see Pandey, Bahadur and Wood, *op. cit.*, pp. 14–15.

These schools are administered, financed, and taught by various orders of the Buddhist faith. The central and local governments make no effort to supervise them. Although there are no statistics pertaining to the schools, it is generally believed that they have decreased markedly in number and enrollment since their origin centuries ago. A few no doubt will continue to survive to serve the needs of training for religious leadership, but their importance as a form of primary education has largely disappeared.

English Schools

Historically, the second type of formalized primary education in Nepal is a replica of the British schools which were established in India. Jang Bahadur was fascinated by the British and had seen their achievements both in Great Britain and in India. In establishing Durbar High School (which included primary grades) in 1854, he instituted a system which falls considerably short of meeting the real needs of Nepalese children. Although this system provided English-speaking government workers to serve the British in India for more than a century, the need for this service did not exist in Nepal. Nevertheless, this system was used exclusively by the Ranas and took root deeper than any other during their reign. The result is that until about 1958, half to two-thirds of the primary schools were of this type. There are about 1,000 English primary schools in Nepal today. Although they are still increasing in number, other types are increasing more rapidly.

The curriculum of the English school includes languages, arithmetic, history, geography, and civics, but much of the time is devoted to learning English, which is taught from the first year of schooling and is the medium of instruction. Methods are usually very formal; there is heavy emphasis on drill, memorizing, and lecturing. Much of the curriculum is oriented toward India and Great Britain. The pupils study Indian and British history, and until recently there was no textbook for Nepali history. Problems in arithmetic are based upon data from Western culture; stories read in language classes come from English legend and literature. This program may lead to a course in the secondary school preparing students for the Cambridge Overseas examination. The conventional organization has been 4 or

5 years for the primary grades, a middle school of 2 or 3 years, and a higher school of 3 years.

The English system is now encouraged by the demand for English-speaking government servants, the requirement of English in all high schools and colleges, and the salary premium for English competency. But since less than one-fifth of the total primary school children (and considerably fewer from the villages) go on to the secondary school, the heavy emphasis on this type of school seems hardly justified.

Sanskrit Schools

Sanskrit was taught, largely on an informal basis, long before the encouragement given to it by Ranodip Shumshere Rana in the 1860's. Many of the early Hindu manuscripts were written in Sanskrit, and there was a continuing demand for scholars to read and interpret and to copy them. Ranodip introduced Sanskrit into Durbar School and thus encouraged the later development of formal Sanskrit schools. The National Education Planning Commission estimated that there were 233 Sanskrit schools in 1954; Upraity estimated that there were 191 in 1959 (see table 1).

The government has given these schools considerable recognition by providing at least temporarily for separate supervision, a Directorate Assistant in charge of them, and special financial grants. Their academic nature and the fact that they are not intended to provide "common" education are recognized, but the place of the Sanskrit scholars in Nepalese life is well established and this form of education will undoubtedly continue, though with diminishing importance.

The curriculum emphasizes the Sanskrit language. Most of the time is devoted to reading and memorizing early religious manuscripts. Nepali and some arithmetic are taught, and recently some history has been introduced. The classes are not rigidly graded; the pupil is expected to progress through the Sanskrit secondary school and college if he is able.

Basic Schools

Basic Education, the first indigenous form of education in India in more than two centuries, was Gandhi's application of his concept of socialism and Dewey's philosophy of education. It was designed for the villages of India, emphasized self-sufficiency, and was closely associated with the freedom movement.

To curry favor with the new Indian government in 1947, and to present a "modern" facade, the Ranas established a teacher-training institution for Basic Education and about 20 Basic Schools, all in the Kathmandu Valley. They knew perfectly well that this form of education, and the philosophy upon which it was based, was antithetical to their political survival, but the program was intended to be carefully controlled and limited. However, the Ranas could not foresee that their concern was unnecessary. Basic Education has not become popular in Nepal (there were only 41 schools in 1959), largely because it is designed for the "common" people and has a vocational emphasis. It does not fit the image of education as "scholarly learning" and thus lacks appeal for those who seek to be lifted out of their village into a government job (and hence economic security) rather than to improve their lot in the village.

The core of the curriculum of Basic Education is craftwork designed to provide self-sufficiency: spinning, weaving, woodworking, and agriculture. With these, one can make his own clothing, build his own house (woodworking includes work with bamboo and thatch and, in Nepal, brickmaking), and grow his own food. The basic communication skills are developed in relation to the crafts. Social studies and physical education are included, and practical experience is provided in various village improvement projects. Most schools aim at self-sufficiency by selling or consuming their own products; all of them own or rent land for agricultural pursuits. Many of these schools provide dormitory facilities for boarding pupils. All begin their programs at day-break or earlier, usually with an hour of prayer while spinning, and end at dusk.

Basic Education carried into the secondary level in Nepal and into the college level in India. The elementary school is usually seven or eight grades, leaving 2 to 4 years for the secondary school. By 1962, all Basic Education schools in Nepal had been ordered by the Department of Education to become schools of the vernacular type described below.

Vernacular Schools

Toward the end of the Rana period, the intense desire for education brought about various subterfuges and makeshift arrangements for learning. Tutoring could be carried on without attracting too much attention, and this gradually led to tutoring on a "class" basis as well as individual work. It was only natural that the first training should be in the "3 R's," and that it should be conducted in the vernacular or mother tongue. Thus the seeds were sown for a type of school that provided general literacy and common learning. Because of the nebulous and varied character of the program of these vernacular schools, the National Education Planning Commission did not collect data on them in 1954, although there were probably several hundred by that time, but Upraity subsequently suggested that by 1959, about 30 percent of the primary schools in Nepal fell into this category.[29]

After 1951, these schools became more formalized and spread rapidly. The curriculum became more stabilized and included the basic communication skills, some social studies, and sports. Some of the schools tend to imitate the curriculum of the English school, but omit English language study; others lean heavily on the Basic Education concept, minus the emphasis on crafts. In 1955, the government made Nepali the official medium for all schools, and it is now the medium of instruction in most schools, except for some along the Indian border which teach in Hindi, the common language in that area.

National Schools

The National Education Planning Commission appointed a subcommittee to design a curriculum that would be truly responsive to the needs of children in Nepal. After a year of study and investigation, this committee recommended a program built around three basic functions of life: Feeding Ourselves, Housing Ourselves, and Clothing Ourselves. These topics provided the core around which the communication skills, social studies, science, aesthetic arts (fine arts, music, folk dancing, literature), personal development (physical training, and moral and spiritual training), and the crafts essential to performing these functions were organized. This curriculum is common for the five primary grades, but becomes diversified at the secondary level to provide for the varying needs of the village and city dweller, the man of the Terai and the man of the hills, and for the personal interests of the individual. It draws heavily from the concepts of Basic Education, from some of the practices of the Vernacular Schools, and, to a lesser extent, from some of the content of the English schools. It was first and foremost a program to meet the indigenous needs of Nepalese children.

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[29] Upraity, *op. cit.*, p. 76.

The Commission adopted the subcommittee's proposal, and in 1956 it was adopted by the government. All new schools were to use this curriculum; existing schools were to adapt to it as soon as feasible. All teachers were to be familiarized with the program, and demonstration schools were to be established.

The success of this program of action has been moderate. Many new schools have attempted to follow its curriculum, and teachers have been trained to use it. But few of the former schools have been converted, and the program suffers from a lack of printed courses of study and teachers' guides to implement and explain the curriculum as necessary. This weakness is now being overcome by the work of a body established in 1960, with American assistance, for the purpose of preparing, publishing, and distributing educational materials. By the middle of 1964 this new Educational Materials Organization in the Ministry of Education had prepared more than a dozen new subject textbooks for primary grades with accompanying teacher's guides, and several of the new texts had already been printed. The pace of this work will be stepped up sharply with the completion of the Educational Materials Center now under construction near Kathmandu.

In the meantime, the number of National Schools is gradually increasing. The only other form of primary education that appears to be increasing rapidly is the Vernacular School, and there are many similarities between the two types. By 1959, about one-fourth of the primary schools were classified as National Schools. Today, the Ministry of Education classifies Vernacular and National Schools in a single category.

Extent of Primary Education

Statistical analysis of the growth of education in Nepal has been handicapped by the lack of provision for the systematic collection of data and by deliberate concealment of developments during the Rana period. However, fairly reliable estimates of enrollment and related data have been made by various agencies and the collection of school data is becoming more systematized.

Estimates of the number of primary schools in 1951 vary from about 100 to 310.[30] The figure depends in part, on how a "school" is defined (e.g., is a tutoring class a school?) and on whether one counts as schools those which were operating clandestinely. Also, one must decide whether to consider the primary divisions (grades 1–5) of the secondary schools (grades 1–10) to be primary schools. If they are so considered, then Upraity's figure of 310 schools must be revised upward to 321 to include the 11 secondary schools which he found to have lower grades. By using the known 1954 figure for the average number of students in a primary school, and adjusting the total to include the pupils of grades 1–5 of the secondary schools, according to a formula developed by the UNESCO team,[31] it is possible to estimate that there were about 9,000 primary school pupils in 1951.

The National Education Planning Commission provided the first comprehensive enrollment estimates, based on data for 1954. In 1962, the UNESCO team made a most exhaustive study and analysis of data, with estimates for 1961. Data for 1963 were provided by a newly established Planning and Statistics Section in the Department of Education. The number of schools for 1963 was presumably determined by actual count, but the enrollment data were estimates derived by multiplying the number of schools by an assumed uniform school size of 40 pupils. Table 1 summarizes the various estimates thus made available.

Although it is becoming more difficult to identify schools by type (it will be noted in table 1 that the sources for 1961 and 1963 data did not attempt this breakdown), Upraity in 1959 classified the 2,189 primary schools then existing as follows: Sanskit, 125; English, 1324; Vernacular, 666; Basic, 74.[32] He presumably included the National Schools in the vernacular category. He also determined the basis of support for these schools in 1959: those completely financed by government, 11.5 percent; schools receiving partial government support, 15.3 percent; schools supported from joint government-foreign aid funds, 22.3 percent; privately supported schools, 50.9 percent.

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[30] *Ibid.*, p. 61 gives the 310 figure.

[31] Three levels of schools have developed in Nepal: a primary school of grades 1–5, a "middle" school of grades 1–7, and a "high" school of grades 1–10. Prior to the UNESCO survey in 1962, *all* pupils in middle and high schools had been counted as part of the secondary school enrollment. The UNESCO team, by assuming a "straight-line" dropout rate from grades 1 to 10, established a formula for estimating the enrollment by grade levels for 1961, and for the first time provided enrollment estimates for primary education which included *all* pupils in grades 1–5, and for secondary education which included *only* pupils in grades 6–10. It counted all units of grades 1–5 as primary schools, whether separate or part of a middle or secondary school. See Wood and Knall, op. cit., p. vii–viii for details.

[32] Upraity, *op. cit.*, p. 75.

Table 1.—Primary schools in Nepal[1]

Type of school	1951 Number of—		1954 Number of—		1961 Number of—		1963 Number of—	
	Schools	Pupils	Schools	Pupils	Schools	Pupils	Schools	Pupils
Gompas	(No data; estimated from 25 to 50 schools)							
Sanskrit	321	8, 970	243	6, 243	4, 001	182, 533	4, 913	191, 620
English			1, 028	49, 296				
Vernacular			no data					
Basic	0	0	49	4, 975				
National	0	0	0	0				
Total	**321**	**8, 970**	**1, 320**	**57, 514**	**4, 001**	**182, 533**	**4, 913**	**191, 620**
Percent of age-group (6–10) enrolled[2]		0. 9		5. 6		15. 8		15. 9

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[1] The sources for the basic data used to compile this table are: for 1951, Upraity, *op. cit.*, p 61; for 1954, Pandey, Bahadur, and Wood, *op. cit.*, p. 36; for 1961, Wood and Knall, *op. cit.*, pp. 27–28; for 1963, an unpublished report (Publication S/2) of the Planning and Statistics Section of the Department of Education, dated Aug. 12, 1963. The basic data for 1951, 1954, and 1961 have been adjusted to include enrollment in the primary divisions of the secondary schools. The 1963 data include the primary pupils from the secondary schools, but the enrollment data are admittedly estimates, and may be somewhat low; according to the projection of 1954–61 trends given in Wood and Knall, *op. cit.*, p. 32, there would have been about 230,000 primary pupils in 1963.

It should be noted that the primary divisions of the secondary schools have been counted as separate primary schools although they are not separately administered. Thus these secondary schools have, in effect, been counted twice: here, and again in table 2.

[2] The sizes of the population age-groups from which these percentages were derived was established by interpolations from the 1961 Census. For details, see Wood and Knall, *op. cit.*, p. v–vi.

In 1961, the UNESCO team determined the primary-age (6–10 years) population, for use in projecting proposed enrollment goals and costs. With these data, the team was able to show that only 0.9 percent of the primary-age group were in school in 1951, that 5.6 percent were enrolled in 1954, and that by 1961, the enrollment had climbed to 15.8 percent, a remarkable achievement for so short a time. Taking into account the present population growth rate, the team recommended efforts to double the 1961 enrollment by 1967, and to raise it to 489,000 pupils, or 35.0 percent of the age group, by 1970.[33]

Upraity also studied the grade distribution of pupils. Especially during a period when many new schools are opening, usually a grade at a time, beginning with the first grade, it is to be expected that enrollments will be higher in the beginning grades. He found the following distribution of pupils in 1959:

Grade:	Percent	Grade:	Percent
I	38. 1	VI	4. 9
II	19. 5	VII	3. 5
III	14. 3	VIII	3. 3
IV	8. 6	IX	2. 6
V	5. 7	X	2. 4

Although one cannot determine the dropout rate from these data (because they are not available for successive years), it is clear that there was in 1959 a heavy attrition in the primary school, in accordance with a pattern common in developing countries.

The same investigator also found that nearly 80 percent of the primary schools in a sample survey were one- or two-teacher schools. This again reflects the fact that many new schools were opening—many of those he studied in 1959 had been open for only a year or two. Most of these schools planned to expand to five-teacher (five-grade) schools within 3 or 4 years. Because most of the villages of Nepal are under 500 population, most of the primary schools will remain small, however.

Upraity found a wide range in the teacher-pupil ratio in these schools—from 1:10 to over 1:100; about 60 percent of them fell within a 1:21–1:40 range, another 25 percent within a 1:41–1:60 range. However, the UNESCO team, utilizing data from the entire country, found an average ratio of only 1:25 for primary schools, and suggested reducing the number of classrooms with very low ratios, as an economy measure to bring the national average to about 1:30. The team also recommended 1:40 as a maximum ratio.

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[33] Wood and Knall, *op. cit.*, p. 32.

Nearly all of the primary schools are co-educational but in some no girls have as yet enrolled. The UNESCO team reported an increase from 4.1 percent in 1954 to 37 percent in 1961 in the percentage of girls in the total primary school enrollment. However, in Upraity's sample (1959), only 16 percent were girls. Nevertheless, the number enrolled is increasing as the new status of women develops, and the right of girls to an education is now generally accepted.

Primary schools are usually non-residential, but residential secondary schools usually include the primary grades. In general, residential schools serve only the more economically favored.

Buildings and learning aids are quite inadequate. Many schools meet in makeshift facilities, or under a tree. In the Terai area, a suitable building is made of bamboo and thatch; in the hilly area, brick or stone are usually used, but there is little glass for windows. None of the buildings are heated. In the tropical Terai, the long 3-month vacation comes in the excessive heat of the summer, while farther north the schools are closed during the cold winter months. There is a dearth of textbooks and even simple writing tools. The teacher must indeed rely heavily on his ingenuity with respect to teaching and learning aids.

Despite many problems, primary education in Nepal is expanding rapidly. During this expansion period it will suffer from many inadequacies, but it will result in widespread functional literacy and provide a basis from which some pupils can proceed to further education. It appears now that primary education will comprise 5 years of general education, more or less adapted to the needs of Nepal's predominantly rural children. Various projections suggest that it will become universal, free, and compulsory between 1980 and 1990.

VI. Secondary Education

Types of Schools

Secondary education in Nepal, as commonly conceived, is of relatively recent origin.[34] Although the early religious schools provided training through the adolescent years, it was on an ungraded basis, a continuous program without organization or other distinctions between primary, secondary, and higher education.

English-Type Schools

The first secondary school, as such, was established by Jang Bahadur a few years after 1854. It is understood that the English-type school, which he adapted from India, at that time offered training first at the primary level and then, when needed a few years later, at the secondary level. Prior to this time, a few Nepalese students from the aristocratic class had been sent to India for study. But secondary education was carefully restricted by the Rana dictators to their own children and to the Kathmandu Valley. By 1951, there were only seven English secondary schools in all of Nepal, and none outside the central valley, but the number had grown to 146 by 1961, and these were distributed throughout the country.

The English-type secondary school was patterned after British education, and it was kept that way by the use of the same final examinations (Cambridge) in India and Nepal as in Great Britain. Indian history was added to the curriculum, but Nepalese history was not included until the late 1950's, because of the lack of a textbook. Prior to 1947, Hindi, Nepali, and other local languages were studied only to a limited extent—mostly grammar and very little literature—partly because of the lack of books. The major emphasis was on English, which was the medium of instruction. Today, the local languages receive more attention; as much as 40 percent of the curriculum time may be devoted to language study, and most pupils study four languages: Nepali, Hindi, English, and Persian or Sanskrit (the base language of most major Indian languages).

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[34] The discussion of secondary education is based mainly on Wood and Knall, *op. cit.*, Pandey, Bahadur, and Wood, *op. cit.*, and *Courses of Study for the School Leaving Certificate.* Kathmandu : The Controller of Examinations, Department of Education, Government of Nepal, 1957.

Very little attention was given to science prior to the mid-fifties. The establishment of a science college in 1956 gave impetus to the development of precollege science courses in the secondary schools. Mathematics, history (English, Indian, and now Nepali), and geography, recently introduced, round out the curriculum. The girls' secondary schools also offer domestic science as part of the regular curriculum, and most schools offer physical training and sports, forensics, and music as extracurricular activities.

Teaching methods are confined largely to lecturing and rote recitation, often *en masse*. There is a single objective: to pass the final School Leaving Certificate (S.L.C.) examination at the end of the 10th grade. Professional leadership, especially as developing in the College of Education, is now attempting to promote a more practical outlook towards secondary education and some recognition of individual differences among students.

A school designated as a "secondary school" generally includes grades 1 through 10. Some schools include only grades 1 through 7 and these are known as "middle schools." Generally speaking, however, there were no "breaks," organizationally or otherwise, between grades 5 and 6 (primary and middle schools), or grades 7 and 8 (middle and high schools) in these schools, until recently. As educational planning procedures have developed, there has been a tendency to consider the first five grades to be a primary school, and the upper five grades a secondary school. The term "middle" school is gradually disappearing as these schools add grades and become full secondary schools.

Sanskrit Schools

The Sanskrit secondary schools developed very slowly, there being only two such schools by 1951. They were preparatory schools for the Sanskrit college, which was finally established in 1948. Prior to that time, a number of promising students were sent to India, particularly to Banaras, to complete their Sanskrit studies. By 1961, however, there were 10 Sanskrit secondary schools in Nepal.

The purpose of these schools is to train Sanskrit scholars. Until about 1960 this purpose was pursued, without any diversions, by devoting the full day to reading Sanskrit. Today, Nepali language, Nepali history and geography, and simple arithmetic supplement the Sanskrit. Sports, forensics, and music are often available as extracurricular activities.

Basic Schools

The introduction of the Basic Education program in 1947 provided for the establishment of Basic High Schools when needed. There were two by 1951, and 13 by 1954, but all were abandoned by 1961.

The curriculum of these secondary schools continued the program of the Basic Primary Schools, and provision was made in the centrally controlled S.L.C. examination for students from the schools to be examined in agriculture, drawing, painting, spinning, weaving, and domestic science, in addition to more academic subjects. However, the curriculum was not sufficiently academic to enable the students to compete with those from English schools, for which the examination was originally designed. The demise of the basic schools was largely due to the increasing availability of English-type secondary schools in which the curriculum was better adapted to the S.L.C. examination, and to the general stigma attached to practical vocational education. Furthermore, Basic Education being new, job descriptions and recruiters made few demands for this kind of training.

Multipurpose (Comprehensive) Schools

The National Education Planning Commission in 1954 appointed a special subcommittee to develop a curriculum for secondary education in Nepal. Following a year's intensive study of the needs of the country's youth, and the best ways of satisfying these needs, the subcommittee proposed a multipurpose or comprehensive high school for Nepal. Such a school would provide general and cultural education, and vocational education in several major areas. Specifically, it provided for training civic and political leaders, professional and economic leaders, and technical leaders, and for the perpetuation of Nepalese culture and the development of democracy.

The core subjects, or common learning, included social studies, applied science, Nepali, English, applied mathematics, and personal-physical development. The vocational "majors" included (as needs indicated) preprofessional, commercial, agricultural, industrial, and homemaking subjects. Finally, provision was made for avocational subjects, and for a major in Sanskrit; thus, the forms and content of the three earlier types of secondary schools could be incorporated into a single national secondary school.

Although the Commission accepted the report of the subcommittee, and the Government decreed that all secondary schools should gradually become comprehensive in nature, it is not difficult to understand why as late as 1961 only two [35] such schools had been established, and these were incomplete in the vocational subjects. By placing vocational education in the comprehensive school, it was hoped that some of the vocational stigma problem would be mitigated, and perhaps it has been. However, the examination system still hangs over secondary education as a "sword of Damocles," ensuring so-called "respectability," and restraining the more practical approach to education. The shortage of teachers for the vocational subjects, the increased costs of facilities, the lack of specific courses of study and teachers' guides, the general shortage of educators with training and experience for this type of leadership, and the slow growth of secondary education, all help to explain why the multipurpose or comprehensive high-school is still in the "drawing board" stage. Yet it must be noted that the development of such schools is being stimulated by the Educational Materials Organization, which has distributed scarce vocational education equipment to the handful of schools currently converting to the multipurpose curriculum, and has included a demonstration school of this type in the new center being built just outside Kathmandu.

Extent of Secondary Education

Secondary education has developed very slowly in Nepal. Such statistics as are available indicate, for example, that only a total of

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[35] The demonstration school at the College of Education, and one at Pokhara in mid-western Nepal.

1,672 students had passed the secondary school-leaving examinations prior to 1952. By the end of 1961, 8,204 additional young people had passed these examinations.[36]

Estimates of enrollment data since 1951 are available and are presented in table 2.

The limited expansion of secondary education was of considerable concern to the UNESCO team. In 1962, it pointed out that enrollment growth was not keeping pace with population growth in the relevant age-group. The National Education Planning Commission in 1954 recommended that secondary school enrollment be kept at about 20 percent of the primary school enrollment for several decades, a ratio also suported by UNESCO. Application of this formula would suggest an enrollment of 36,500 in 1961, nearly twice the actual enrollment. The UNESCO team also noted a shortage of secondary school graduates available for teacher, nursing, and other training, and recommended accelerated efforts to bring secondary enrollment to 20 percent of primary enrollment by 1970.

Secondary education in Nepal is mostly co-educational, but there are several girls' secondary schools and one boys' secondary school, a private missionary sponsored school. The percentage of girls enrolled is estimated to have increased from 6 percent in 1954 to 19 percent in 1961.

To a greater degree than is the case with primary schools, secondary education has failed to reach the more remote and less populated areas of Nepal. However, the Three-Year Plan (1963–65) proposes at least one secondary school in every development block.

The teacher-pupil ratios vary by districts from 1:6 to 1:19, with a national average of 1:13. The UNESCO team recommended increasing this ratio to 1:20 or 1:25 as an economy measure and to provide for an immediate increase in enrollment.

There have been proposals to lengthen the high school to 6 years. The UNESCO team recommended that this be postponed for a few years, as it would increase high school costs by 20 percent, and additional funds are more urgently needed for increasing enrollments.

Wastage and the Examination System

The control of the curriculum of secondary education is at present in the hands of the S.L.C. Board, which is now appointed by the

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[36] Wood and Knall, *op. cit.*, p. 42.

Table 2.—Secondary schools: By type of school, number of schools and of pupils [1]

Type of school	1951 Number of—		1954 Number of—		1961 Number of—		1963 Number of—	
	Schools	Pupils	Schools	Pupils	Schools	Pupils	Schools	Pupils
Sanskrit	2	1, 215	5	14, 777	10	21, 115	182	33, 340
English	7		65		144			
Basic	2		13		0			
Comprehensive	0		0		2			
Total	**11**	**1, 215**	**83**	**14, 777**	**156**	**21, 115**	**182**	**33, 340**
Percent of age-group (11–15) enrolled		0. 3		1. 6		2. 1		3. 1

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[1] The sources for this table are the same as for table 1. The basic data for 1951, 1954, and 1961 have been adjusted to exclude pupils of the primary grades of the secondary schools. Only schools having all secondary grades (6–10) have been counted in the number of schools, but the 6th and 7th grade pupils of the "middle" schools have been included as secondary school pupils. The data for 1963 are estimates, but seem to be reasonable.

Table 3.—Secondary school examinations in Nepal: By subject, number of papers, and "marks"

Subject	Number of papers	Maximum "marks"
English	2	200
Elementary Nepali and Sanskrit [1]	2 (50 each)	100
Oriental Language (Nepali, Hindi, Urdu, Bengali, Marthilli, or Bhasa)	1	100
Mathematics compulsory	1	100
or		
Arithmetic and Nepali counting	2 (50 each)	100
History or geography	1	100
General science or general knowledge	1	100
or		
Domestic science (for girls)	1	100
Any Group B optional subjects [2]	1	100
Any Group C extra-optional subjects [3]	1	100
Total	10	900

[1] Girls may substitute First Aid and needlework for Sanskrit.

[2] Agriculture, chemical technology, drawing and painting, classical language, elementary biology, elementary civics, elementary physics and chemistry, geography, history, mathematics, music, spinning, weaving.

[3] Commercial geography, hygiene and physiology, modern European language, rural economics and cooperation.

Minister of Education. Since 1932, when the first board was appointed, this board has determined the subjects and contents of the examinations which are given at the end of the secondary school period to determine whether students are to be given a School Leaving Certificate. Thus, in fact, preparation for these examinations becomes the curriculum; all efforts are bent towards them, and learning experiences not so covered have very little status.

The S.L.C. Board provides a printed list of the subjects in which students are to be examined. The subject list does not change without due notice, which may extend for as long as 5 years if such a waiting period is necessary to rearrange the students' programs. For example, the 1951 regulations, still in effect with amendments, provide examinations as outlined in table 3.

The S.L.C. Board also issues a pamphlet [37] which prescribes the textbooks to be used and enumerates in detail what each examination will cover. For example, the English examination breaks down the first paper as follows:

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[37] *Courses of Study for the School Leaving Certificate.*

	"Marks"
Translation from Nepali to English, 20 lines	25
Letter writing, story, amplification and dialogue	15
Essay	30
General question from "Rapid Reading Books"	15
Substance writing	15

The arithmetic examination covers "the four simple rules, the H.C.F. and L.C.M., vulgar and decimal fractions, reductions, extraction of square root, practice, ratio and proportion, simple interest, metric system, square and cubic measure." The history of Great Britain covers: "William, Mary and Anne (1688–1714), Bill of Rights, Parliament, Whigs and Tories, Cabinets . . . policies of Baldwin, Chamberlain, and Churchill . . . ."

"Practical" examinations are included in such subjects as First Aid and needlework, agriculture, weaving, and so on. An amendment relative to the English examination reads: "Delete poetry pieces nos. 1, 3, 6, 19, 33, 35, 40, 66, and 70," and "Add nos. 16, 'Man,' 32, 'Avarice,' and 75, 'The Last Word.' " This kind of detail continues for 64 pages.

This examination system produces some interesting phenomena. To add a subject to the curriculum requires the approval of the S.L.C. Board, and this in turn requires that an examination for the subjects actually be prepared before the subject can be approved and taught. Students feel that they do not have time for any learning experiences not covered by the examinations. Furthermore, the students hold the board strictly to the printed outline of questions; student rioting has broken out when "surprise" questions have been included or the questions have seemed too difficult. New examination questions are carefully guarded against theft; answer papers are guarded to prevent alteration.

Although no official provision is made for annual examinations or progress reports, many schools now supplement the final S.L.C. examinations with annual tests and issue progress reports. On a semi-official basis, "practice exams," which attempt to duplicate the questions on the final examination, are given just before the S.L.C. examinations.

Anyone may take the examination by paying his fee, even though he may have made unsatisfactory progress or "failed" the practice exam; or he may take it as a "private" candidate, even if he has never attended school.

The examination system obviously impedes the development and application of modern theories of learning and a practical philosophy of education. Of equal importance is the tremendous wastage that results, both in economic and human resources. Nearly two-thirds of the S.L.C. candidates are failed each year, and the other third do not generally attain standards comparable to secondary school diplomas in other countries. The rate of failure was 40 percent prior to 1951, but with the expansion of secondary education since then, it has risen steadily to 65 percent in 1961. The UNESCO team in 1962 severely criticized this wastage, and estimated the economic loss, based on potential life-time earnings, to have been Rs. 220,000,000 from 1934 to 1961, and predicted it would rise to Rs. 1,000,000,000 by 1970 if some action is not taken to correct the system. The UNESCO team further pointed out that present teachers and facilities could produce twice as many graduates at the same cost (without increasing the teacher-student ratio) under an improved system. And, one cannot ignore the human loss—loss of status, position, morale, and opportunity to serve the community and nation.

Improvement of Secondary Education

A number of measures seem essential to the development of modern secondary education in Nepal:

1. Implementation of the comprehensive curriculum and introduction of modern methodology
2. Adoption of the practical philosophy recommended by the National Educational Planning Commission and officially approved by the government
3. The development of criteria and machinery for maintaining reasonable standards
4. Gradual elimination of the present examination system.

Educational leadership is aware of these needs, and the improvement of secondary education appears to be the next focus of attention on education in Nepal.

An Education Act has been proposed which would establish a Board of Secondary Education, composed of three to five members, representing both government and lay persons and including the Director of Public Instruction as executive secretary. The board would be responsible for the operation of all secondary schools (both public and private) in the country. Administrative responsibility for all employees of secondary schools and the division of secondary education in the Ministry of Education would be transferred to this board.

Under the proposed Act, the board would receive lump-sum grants from the government and have complete autonomy in the distribution of funds—thus, it is hoped, freeing it from various political pressures and government "redtape." Whether it would have the authority to assess direct taxes has not yet been decided.

The present S.L.C. Board would continue to function as an examining agency. An Academic Committee would be appointed to develop and approve the curriculum, courses of study, and textbooks, and to deal with all other academic matters.

Under such an arrangement, the development of secondary education could be given considerable impetus. The arrangement implies, however, the separation of primary and secondary education, such as occurred in the United States during the early developmental period, and which educators have been trying to correct for the last three or four decades. It might well result in separate autonomous agencies for primary, secondary, higher, and technical education in Nepal.

VII. Higher Education

The Development of Institutions

Higher education in Nepal has developed quite recently. Following the establishment of colleges and universities in India during the last quarter of the 19th century, a few Nepalese youth probably found their way into them; it is known that some from the more favored economic classes were sent to India for study after 1900. College attendance in Nepal increased somewhat after 1918, but the most significant expansion came after 1951.

Tri-Chandra College

The first college was established in Nepal in 1918 by Prime Minister Chandra Shumshere Rana, and named Tri-Chandra College. The first part of the name came from the then youthful King Tribhuvan who, with the rest of his family, was confined to the palace grounds by the Rana dictators. Presumably Chandra thought the King's name would lend [illegible] and prestige to the institution, which it has done.

Chandra's motives for establishing a college must have been mixed. It has been suggested that he wanted a "showplace" to demonstrate his "progressivism." But there were few visitors to impress and the Nepalese and Indians knew him well by his other actions. It is known that he and other Ranas were dissatisfied with the kind of higher education and the college life in the Indian universities to which a few Nepalese youth were being sent. To correct this condition, and perhaps make higher education less expensive by keeping youth at home, may have been the predominant motives. Some have suggested also that Chandra's motives were altruistic and that he intended to open the schools and the college to the common people. Support for this is found in his now classic prediction at the inaugural ceremonies when he said, as he cut the ribbon across the college entrance door, "With these scissors, I cut the future of the Ranas." He could see that education was incompatible with autocracy; he must have foreseen the use of Tri-Chandra College by the common people.

Although the enrollment never exceeded 200 before 1951, Tri-Chandra College today is the major institution of higher learning in Nepal. In 1961 it enrolled 1,550 students in its three divisions: liberal arts, science, and commerce. It offers three baccalaureate degrees, each requiring 4 years of study: the B.A. with majors in history, political science, economics, English and the other liberal arts; the B.Sc. with majors in the several science areas; and B.Com. with majors in secretarial science, accounting, and general business. Like the other colleges, Tri-Chandra requires that candidates for admission be able to present the Secondary School Leaving Certificate.

The Sanskrit College

Sanskrit education received modest support from the Ranas and even from serving boys not born of Rana families. Quite a few of the boys were sent to Banaras for college training, perhaps because Sanskrit scholars were not considered to pose a threat to the Rana autocracy. In 1948, the Sanskrit College was established in Kathmandu with about 25 students. By 1961, it had increased in size to 16 staff members and 142 students, and two regional Sanskrit Colleges had been established at Dharan and Dang. They offer a degree comparable to the baccalaureate.

The curriculum follows the pattern set by the Sanskrit College at Banaras. Prior to 1956, all of the curriculum was devoted to Sanskrit studies; since that time, some social sciences, Nepali, and other liberal arts classes have been introduced. The function of the institution remains the same, however—the preparation of Sanskrit scholars.

Professional Colleges

In 1954, a Law College was established in Kathmandu, operating during evening hours. It provided a 2-year Bachelor of Laws (B.L.) program, with a curriculum centering on the law of India, England, and Nepal. It proved to be quite popular, both for those who gave serious consideration to the study of law and those who desired an additional degree. By 1961, it had graduated 95 students and achieved an enrollment of 181 for that year.

The College of Education was established in 1956 to prepare secondary school teachers, normal school teachers, school administrators, and other professional leaders. It offers a 2-year program for the Intermediate Education (I.Ed.) Certificate, and an additional 2 years for the B.Ed. degree, based on liberal arts and professional training, with a curriculum similar to that of American teachers colleges. It also offers a 1-year B.Ed. degree for liberal arts graduates, which comprises only the professional work of the 4-year degree. The college also plans to offer the M.Ed. degree, earned after 1 year of advanced professional training. In the 3 years from 1959 to 1961, the institution graduated 75 students; enrollment in 1961 was 150.

The Public Commerce College was established in 1958 as a night school and offers the 2-year Intermediate Commerce (I.Com.) Certificate and the Baccalaureate (B.Com.) degree. It has been quite popular, as it offers college opportunity to youth who must work. In 1961, it enrolled 253 students. The commerce curriculum is also offered on a daytime schedule in Tri-Chandra College (for 527 students) and in four regional liberal arts colleges at Dharan, Biratnagar, Birgunj, and Tansen. The curriculum is both general and professional, but there is limited training in the use of typewriters and other business machines.

A College of Music has been in existence for several years and was recognized by the government (with a grant-in-aid) in 1963. The enrollment is less than 25 and no degrees have been granted as yet.

Other Liberal Arts and Science Colleges

With the overthrow of the Ranas (February 1951), higher education spread rapidly in Nepal. Before the end of 1951, two new liberal arts colleges had opened in Kathmandu, one a "night" college. In 1952, a college was established in Birgunj, and in 1954 another was set up in Patan. The next year, two colleges opened in eastern Nepal, and the institutions then multiplied at the rate of about four per year, until by 1961 there were 31 institutions of higher learning in Nepal, including the four professional schools and a university (see list, appendix A).[38] Several more are known to have been organized since then, but they have not yet received final official government recognition in the form of financial grants.

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[38] Wood and Knall, *op. cit.*, p. 48.

Traditionally in Nepal, the liberal arts college does not include science. A science department was added at Tri-Chandra College in the late 1940's, and an independent Public Science College was established in 1956. By 1961, three of the regional colleges also offered science, and the science enrollment was: Tri-Chandra, 640; Public Science College, 303; others, 175. The science curriculum is at the undergraduate level only; laboratory facilities are limited in the regional colleges.

The University

The concept of a university often encountered in the parts of Asia subject to British influence is that of an organization which coordinates several colleges and administers their final examinations; it may have no teaching function as such. Under this pattern, Tri-Chandra College from its inception was affiliated to Patna University in India, and the Sanskrit College to Queen's College in Banaras. As they were founded, others sought affiliation to Indian institutions, except for the College of Education, which awarded its own degrees on the authority of the Nepal Education Ministry.

This dependence on Indian universities was onerous to many Nepalese. In August 1948, the Prime Minister appointed a commission of 25 members to prepare a plan for the establishment of a national university in Nepal. The commission recommended a residential type university that would offer classes as well as affiliate the various colleges of Nepal, and would also develop courses of study for the various subjects, but nothing came of the recommendations.

In 1954, the National Education Planning Commission appointed a subcommittee to study higher education. This group, and subsequently the Commission, strongly recommended the immediate establishment of a national residential-affiliating university. Details were outlined in the Commission's report.[39]

In 1956, another university commission was appointed. After 3 years of deliberation, Tribhuvan University was formally established by Tribhuvan's son, King Mahendra. By 1963, the university had procured its own site, and was offering graduate classes, supervising the examinations, and gradually extending affiliation to some of the colleges. The charter follows the Indian pattern of organization and administration and provides for both teaching and affiliating functions.[40] The present University Senate now has sole legal responsibility for higher education in Nepal and has the authority to grant academic recognition to the several colleges, but is largely dependent upon the Education Ministry for operating funds, and, in this way, shares the responsibility.

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[39] Pandey, Bahadur, and Wood, *op. cit.*, pp. 127–150.

The Senate comprises about 50 persons, including officials from the various departments of the government and representatives of the staff and alumni of the University. It generally meets once a year. A smaller body, know as the Syndicate and responsible to the Senate, meets monthly and supervises the actual operation of the University. The Chancellor, at present His Majesty, the King, is an honorary official, but has full veto power. The Vice-Chancellor, appointed by the Chancellor, is the actual administrative head of the University. Principals (heads) of the several colleges operate their own institutions with considerable autonomy.

Expansion of Higher Education

Higher education enrollment increased more than twenty-fold in the decade 1951–61, as may be seen in table 4. The UNESCO team, however, in 1962 believed that this expansion had created an imbalance and strongly recommended several controlling measures. Their report pointed out that the National Education Planning Commission in 1954 had recommended that college enrollment be held to 5 percent of the high school enrollment, a ratio now supported by UNESCO for developing countries. This ratio would yield a college enrollment of 1,056 for 1961, based on actual secondary school enrollments in that year, or 1,825 if secondary enrollments in 1961 had been the full recommended 20 percent of primary school enrollments (see p. 42).

Sixteen of the colleges existing in 1961 had less than 100 students—one institution had only 6 enrollees; 10 more fell in the 100–250 category. Many had no buildings of their own, no libraries, no laboratories and no money to pay staff members. The UNESCO team recommended an immediate moratorium on the establishent of additional colleges, and the consolidation of existing liberal arts and science

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[40] See "An Act Promulgated for the Establishment and Organization of a Teaching and Affiliating University," *The Nepal Gazette,* June 8, 1959.

Table 4.—Selected data on higher education [1]

Item	1951	1954	1961
Number of colleges [2]	2	14	33
Number of students	250	1, 320	5, 143
Number of staff	n.a.	86	417
Percent of women	n.a.	4. 8	15
Number of graduates in given year	n.a.	94	244
Number of students abroad	n.a.	2, 000	3, 740

[1] SOURCE: Wood and Knall, op. cit. p. 46.

[2] See appendix A for list of colleges.

institutions into three strong colleges, one in Kathmandu, one in East Nepal, and one in West Nepal. The team also recommended the reduction of total college enrollment to about 4,000 by stiffening entrance and retention standards.

Furthermore, as at the secondary level, there is a heavy wastage of human resources in higher education, caused by the examination system. Only about 40 percent pass the intermediate examinations, given at the end of the first 2 years; about 45 percent pass the liberal arts and science baccalaureate examinations; and about 75 percent pass the professional baccalaureate examinations. Thus, the application of better screening procedures could well reduce enrollments without reducing the number of graduates.

Finally, the team found a serious imbalance in enrollments. It was estimated that there were about 500 unemployed college graduates in 1962, nearly all of them in economics, political science, or history. On the other hand, the College of Education could not fill its classes, and scholarships for nursing, medicine, engineering and other fields were unused. The UNESCO team recommended a system of quotas to correct and control this situation.

Quality of Higher Education

From the foregoing evidence it would appear that the quality of higher education in Nepal suffers from lack of organization and control, low standards of admission, poorly paid teachers, lack of facilities, and dissipation of efforts. The teacher-student ratio for all colleges is 1:14, but it is as low as 1:6 in small institutions. The UNESCO team recognized the desirability of keeping the ratio low, but pointed out that maintenance of the present ratio is unnecessarily expensive and thus often results in the hiring of low quality staff members whose teaching is unchallenging to the student. By increasing this ratio to 1:20, teachers could be paid more attractive salaries. Also, by reducing enrollments, inadequately trained teachers could be released until properly trained.

Teaching is largely confined to lecturing; there is little incentive to study or to try to learn until the last few weeks before the examinations, at which time there is intensive "cramming." Teaching aids, even textbooks, are scarce.

Nearly one-third of the educational expenditures in Nepal today are for higher education. In view of the imbalance between secondary and higher education enrollments, the UNESCO team recommended that higher education costs should be cut back to perhaps 20 percent of the total.

Several hundred students are sent abroad each year, usually on scholarships offered by the host country government, for advanced training in disciplines not offered in Nepal: medicine, engineering, doctorate-level education, and other areas. This program of overseas training will probably continue until funds and demands are adequate to justify the establishment of additional professional colleges in Nepal.

In conclusion, it should be noted that some efforts are under way to improve the academic quality of Nepal's higher education. Some of the newer practices adopted by the College of Education when it was established have been introduced into other colleges. The Academic Council of the University has recommended certain improvements. As a result of these and other forces, there are recognizable trends which suggest a gradual broadening of the curriculum, the introduction of newer and varied methods of teaching and new teaching aids, and a reformation in the examination system. In support of the latter cause, some colleges have introduced internal examinations and student assessment by the instructors themselves.

Furthermore, there is growing awareness of the *need* for improvement and reorganization of higher education. The recommendations of the UNESCO team regarding enrollment control, both in respects to total numbers and to distribution among specific disciplines, and regarding the consolidation of existing colleges and new expansion efforts, are being given careful consideration. Most important, there is now an administrative structure for supervising and controlling developments in Nepal's higher education.

VIII. Teacher Education

Development of the Program

The Normal Schools

The first institution for the education of teachers in Nepal was established in 1947 when the Basic Education Program was introduced from India. Because of the unique characteristics of the program, it was necessary to prepare teachers in the content of the curriculum as well as in methodology.

Several persons were sent to India for training as staff members of the institution, a building was erected, and a demonstration school was established. The program did not flourish, however, due to lack of popular interest and financial support, and the institution was closed in 1954. It is estimated that about 100 teachers were enrolled during this period.

The National Education Planning Commission early in 1954 recognized the importance of teacher education, if its major goals were to be realized. Months before making its report, the Commission had urged the Education Ministry to initiate a program for preparing primary school teachers. Accordingly, the Ministry negotiated a three-way contract with the U.S. International Cooperation Administration and the University of Oregon to plan and develop a complete program for the education of all kinds of teachers, administrators, and other needed educational personnel.

Within a few weeks the Basic Education Training Center was reorganized, and was reactivated in July 1954 as the first Normal School in Nepal. The institution offered a 6-month primary school teachers' course for inexperienced candidates, and a 3-month inservice course for those having some teaching experience. In 1955, the course was extended to 9 months for all candidates, allowing about two-thirds of the time for acquainting them with the new primary school curriculum recommended by the National Education Planning Commission, and the remainder of the time for professional work. In 1963, the course was extended to 2 years, thus allowing for a much higher level of training.

Those in charge of the program were fully aware of the universal problem of mobility inertia, the rural-urban migrating pattern in developing countries, and the prevalence of inherent provincialism in such countries. In these circumstances, it has been found that people who have been reared in large towns and cities do not want to go to rural areas to live and teach; people reared in rural areas who come to urban communities for as long as 9 months to prepare themselves as teachers do not want to return to their rural or village homes to live and teach; and those who live in rural areas and small villages do not readily accept teachers from urban areas. In short, provincialism discourages mobility. For these reasons, in Nepal there were very few candidates for training from outside the Kathmandu Valley; few teachers were willing to go to the hinterlands to teach; and few communities outside the valley were ready to accept teachers from the urban centers.

To cope with this situation a unique plan was conceived. Beginning in 1956, Mobile Normal School Teams were organized and given professional education, and then sent to the various districts of Nepal to conduct 9-month training courses for youth in the area. Soon, a dozen teams were in the field. By rotating these teams each year, all of Nepal can be covered in 3 or 4 years; the teams can then begin their circuit again. In this way, the normal school program has been taken to the hinterlands and the problems mentioned above have been largely overcome.

A team generally comprises four to six specialists in the social sciences, languages, science, crafts, pedagogy, fine arts, music, and sports. Each team carries its own professional library and textbooks. On arrival in a district, it procures quarters for the Mobile Normal School and obtains the necessary furniture. Sometimes the team must construct a bamboo and thatch building, which upon their departure becomes a new primary school.

Several weeks are devoted to recruiting 30 to 75 trainees from the villages within 2 or 3 days' journey of the school. Village headmen are asked to send candidates for the program and to agree to open new schools upon return of the new teachers. At the close of the course, the team members spend several weeks helping the graduates open their new schools, and then return to Kathmandu for a 6-week refresher workshop with all of the other Normal School teachers, and reassignment.

In Kathmandu, many of the trainees are high school graduates. In the hinterlands, however, where there have never been any schools, most of the candidates can claim as a qualification no more than literacy, usually obtained through a tutor, perhaps a retired Gurkha soldier. In the extreme north, where residents speak mostly the Tibetan language, the team spends the first year on language training, and returns a second year to complete the program.

The Mobile Normal School Teams are supervised by staff members of the College of Education who visit the normal school every 2 or 3 months. This provides firsthand knowledge and experience for the college staff members as well as contacts with the normal school. The school in Kathmandu now serves as a model and practice school for normal school staff being prepared in the College of Education.[41]

The College of Education

The second phase of the teacher education program was the development of a College of Education. Professional preparation of the staff for this institution began in 1954 with some on-the-spot professional courses taught by the writer. During 1955–56, eight Nepalese went to the University of Oregon for further education, and to plan the details of the College of Education. On their return, the College was opened. From 1956 to 1959, 40 additional educators were sent to Oregon for training.

The functions of the College are: to prepare secondary school teachers, administrators and supervisors, normal school staff, and other educational personnel as needed; to provide workshops and other classes for inservice training; to supervise the Normal School program; to encourage and supervise educational research; to direct the preparation and publication of textbooks and other teaching aids; to establish and operate demonstration primary and secondary schools; to develop an adult literacy program; and to provide other educational services and leadership as needed. All of these activities were initiated and developed to an operational level by 1959; subsequently, several were transferred to the Education Directorate.

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[41] Additional details on the preparation of primary teachers are included in *Manual for Training Teachers in Nepal.* Kathmandu: Bureau of Publications, College of Education, 1956; and Hugh B. Wood, "Mobile Normal Schools in Nepal" (unpublished manuscript).

The College of Education today has good facilities, and has become a part of the Tribhuvan University. As indicated in the previous section, it offers the 2-year I.Ed. Certificate and the 4-year (general and professional education) B.Ed. degree, and also the 1-year (professional) B.Ed. degree. It plans to offer the 2-year (advanced professional) M.Ed. degree soon. The students must have passed the S.L.C. to be admitted to the 4-year program (which includes 2 years for the I.Ed. certificate and 2 more years for the B.Ed. degree). Candidates for the 1-year professional B.Ed. degree must hold a baccalaureate degree; candidates for the M.Ed. degree must hold the B.Ed. degree. All students in the College of Education receive subsistence stipends; in spite of this, there is a severe shortage of applicants to the College.

Extent of Teacher Education

Since the initiation of the Normal School program in 1954, an effort has been made to keep a balance between the number of teachers prepared and the number needed. This has not been easy. During the first 2 years there was a surplus of trained teachers in the Kathmandu Valley and a shortage in the hinterlands. Later, this surplus shifted to the Terai area, where there were more schools and more educated people, and recruiting was easier than placement.

In 1962, the UNESCO team made an extensive study of the distribution of trained teachers in relation to the total number of primary school teachers in each district. This, in a way, was a test of the effectiveness of the assignment of the Mobile Normal School teams, as well as an indication of whether or not there was balanced distribution. They found that 6 out of the 32 districts had no trained teachers. In three districts there were more trained teachers than available positions, indicating some unemployment. The majority of the districts, however, had from 30 percent to 80 percent trained teachers (national average, 52 percent) indicating reasonable balance.

From 1954 to 1961, 3,598 primary school teachers were prepared in the Mobile Normal Schools in 25 different centers. At various times, from 4 to 15 teams, involving a total of between 22 and 49 staff members, were engaged in this work.

From 1956 to 1961, the College of Education enrolled an average of 170 students, graduated 75, and conducted workshops for 233 educators.

The attrition in the normal schools, between admission and completion, was only 2.5 percent in the 1954–61 period. In the College of Education, however, higher academic standards, a longer period for the program, and competition from other colleges, have raised the annual attrition rate to nearly 20 percent. The loss on the final examination has been only 18 percent.[42]

Status of the Nepalese Teacher

The Nepalese teacher does not hold a particularly high social or economic position in Nepalese society today, but he holds an important one. Traditionally, teachers came from the Brahmin class (highest in the caste system); they were called "guru", a term of high respect and often affection. Older teachers in Nepal are still likely to fit this description.

Today, the teacher instructing in a new school or preparing for the profession is young, and may come from any caste, or be of the female sex. It is estimated that the ratio of women teachers has increased from about 2 percent in 1954 to about 15 percent in 1961. In the village, the teacher may be called on to settle minor disputes, run the library, read and write letters for the villagers, render first aid, and give advice; but his youth, if nothing else, precludes his acceptance as a major village leader. In larger centers, his functions may be less inclusive and he may be less active and well known in the community.

In 1953, primary school teachers commonly received Rs. 25 per month, secondary school teachers, about Rs. 65. The government scale for "peons" and sweepers (unskilled laborers) had been raised the year before from Rs. 15 to Rs. 30 per month. In 1954, an attempt was made to establish a minimum of Rs. 60 for primary school teachers who had completed the normal school program and had taken teaching assignments in new schools being opened with partial government support. Inasmuch as the community was supposed to pay one-third of the teacher's salary, but usually did not, the effective scale became Rs. 40.

Even today, no statistics are available for teachers' salaries, but they are known to be low. It may be safely assumed that at the primary school level, salaries are comparable to those of sweepers and peons, or about half the income of a trail porter. At the secondary level, they may be slightly more than double that of the primary school teachers. The present official government pay scale is: peon, Rs. 45; positions requiring 2 years of college, Rs. 120–175; bachelor's degree, Rs. 200–400; master's degree, Rs. 350 and up. However, not all schools pay according to this scale, and the average will be considerably less.

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[42] Wood and Knall, *op. cit.*, p. 58–63.

There are no certification requirements for teachers as yet, but the question has been under discussion from time to time. Primary school teachers will probably be required to have 1 or 2 years of normal school, and high school teachers, 2 years of college or a baccalaureate degree. Enforcement of such requirements will have to be gradual in order to allow teachers to attain these respective levels of education while continuing their teaching duties. Teachers associations and other professional organizations are gradually being formed. A National Secondary School Teachers Association and an Association of University Teachers have held organizational meetings; also, a single national organization for educators has been proposed.

IX. Specialized Technical and Vocational Education

Extent of Specialized Education

The economic development of Nepal has created a demand for specialized technical and vocational education of many types and levels. The first programs for this purpose were established in 1953 with the introduction of economic aid, initially from the United States and, later, from other countries and agencies. Today, nearly all of the specialized training institutions are part of the foreign economic aid program.

The fact that support for these programs comes largely from 11 foreign countries and agencies, each with its own motives and purposes, explains the general lack of coordination. In 1962, the UNESCO team identified 24 separate institutions, with a combined staff of 124, offering training to 1,562 persons. These programs were administered by eight different ministries, none of which was the Education Ministry.

In addition to the local program, 2,163 trainees were sent abroad for technical, and in some cases, professional education, between 1951 and 1961. Two-thirds of these were trained in India, about 250 in the United States, and the remainder in 18 other countries. About half of the totals were enrolled at subcollegiate level.

A third source of specialists is the large number of retired Gurkha soldiers, estimated to be increasing at the rate of about 1,000 per year. These men receive various types of technical training in the Indian and British armies (in mechanics, communications, medical service, etc.), and special training of their own choice just prior to retirement. They generally retire between the ages of 37 and 40, and thus represent a technically trained manpower potential, not heretofore utilized.

Table 5.—Selected data on specialized training in Nepal

Institutions and fields	1961		Total trained	
	Enrollment	Staff	In Nepal to 1961	Abroad under foreign scholarships, 1951–61[1]
Total	**1,562**	**124**	**3,895**	**2,163**
HEALTH	--------	--------	--------	418
Nurses Training School	46	7	24	--------
United Mission Hospital	8	3	3	--------
Health Assistants School	46	7	65	--------
AGRICULTURE, FORESTRY, HOME ECONOMICS				
Rural Institutes (2)	159	25	1,360	41
School of Agriculture	78	13	301	277
Dairy Training	0	0	6	--------
Forestry Institute	103	4	102	55
Home Economics Training School	40	6	125	--------
Irrigation School	17	2	0	--------
INDUSTRY	--------	--------	--------	43
Cottage Industry Training Center	466	18	1,133	--------
Swiss Mechanical Training School	4	2	8	--------
Red Cross Tibetan Relief School	280	6	0	--------
ENGINEERING				
Engineering School	20	2	20	603
Overseers Training	101	5	32	--------
Cadastral Survey Schools (4)	0	0	548	--------
Mining Training School	16	8	0	--------
Telecommunication School	143	10	0	35
ADMINISTRATION	--------	--------	--------	[2] 209
Clerk-Secretarial Training Center	35	2	0	--------
Population Census Training	0	4	168	--------

Source: Wood and Knall, *op. cit.*, p. 56 and 59.

[1] In addition to those listed hereunder, 415 scholarships were granted in "general education," mostly at the college level, which included some training in technical subjects, especially in home economics and engineering.

[2] Includes:

aviation	33
publicity	9
survey and statistics	26
administration	53
cooperatives	26
law	11
police	27
taxes and customs	11
tourism	3

An overall picture of the status of specialized training in Nepal is provided in table 5. The training courses listed in the table, and discussed in more detail below, vary widely in duration and level. Some courses—specifically those in nursing—last for as long as 3½ years, while others, such as certain programs in the clerical-secretarial center, cover only 2 or 3 months' training. The level of instruction in the various courses is also quite disparate, and is indicated by differing admission requirements. Only a few programs—e.g., more advanced courses offered at the rural agricultural institutes—require that entrants have college degrees or intermediate certificates. Other courses, including the one in dairy training and the Swiss mechanical training course, require no previous formal education. The majority of the courses are open to secondary school graduates.

Health

In the field of health, there are three local training programs, all in Kathmandu. WHO sponsors a nurses training school in connection with the government hospital, and a Protestant mission hospital trains nurses. The U.S. Operations Mission (now USAID) sponsors a Health Assistants School for training laboratory technicians and field workers. In addition, various agencies have made scholarships available for foreign training, mostly for doctors; 418 were sent abroad between 1951 and 1961. These agencies are under the Health Ministry.

Agriculture, Forestry, Home Economics

The first training programs to be inaugurated after 1951 were two Rural Institutes for training Village Development Workers, one sponsored by USOM, the other by the Indian Aid Mission. The functions of the men trained in these schools are similar to those of the County Extension Agent in the United States. At about the same time a Home Economics Training School was established, with the aid of a Ford Foundation grant, to train women to serve in the villages, much as the U.S. Home Demonstration Agent. The Swiss also introduced a small program to train cheesemakers and other dairy specialists. Later, USOM assisted in opening schools for training agriculture technicians and forestry specialists, and in 1961, a special school for training irrigation specialists was established.

In addition to these local programs, about 420 persons were sent abroad prior to 1961 for training in agriculture, forestry, and home economics. These various programs have been administered by ministries for village development, agriculture, forestry and public works.

Industry

The major program of the Ford Foundation in Nepal was the establishment, with mostly German technicians, of a Cottage Industries Training Center in 1954. This program eventually expanded to include more than 20 trades or crafts, and several short-term regional institutes were held from time to time. The German Government added several trades to the training center in 1962. The Swiss have trained a few mechanics, but their major activity in this area has been, with the support of the Red Cross, the administration of the Tibetan refugee program, which includes primary schools for the children and trade training for adults. Only 43 scholarships for foreign study were awarded in the field of industry between 1951 and 1961.

Engineering

Several unsuccessful attempts have been made to establish an engineering college in Nepal. An engineering school was set up in 1954, but by 1961 only 20 students had completed the 2-year course. At one time, the facilities of the school were used to train "overseers," or men who could act as foremen on simple engineering jobs. In 1957, four cadastral survey schools were established in Kathmandu, Birgunj, Biratnager, and Bhairawa to provide a 6-month course for training surveyors, but these were discontinued after one term. In 1960, a telecommunications school was opened to train technicians for the newly installed telephone system, and in 1961, a Mining Training School was opened.

More than 700 scholarships for foreign study were awarded in engineering and related subjects between 1951 and 1961. These programs were sponsored by various aid agencies, and administered by several different ministries.

Administration

Both of the schools in the administration category were established after 1960, one for training workers for the 1961 census, the other for training government clerks and secretaries. However, some of the earliest foreign scholarships (five in 1952) were awarded for training in police work, law, and statistics; nine were awarded in 1953 for study in the fields of publicity, taxation, cooperatives, and administration. In 1961, the Government opened a Tourists Bureau and sent three persons abroad for training.

Status of Specialized Education

Technical and vocational education is critically essential in Nepal's economic development. In 1962, the UNESCO team made a thorough study of the extent and success of the several programs of such training, and offered a number of recommendations:[43]

> 1. Part of the present technical and vocational education can be provided in comprehensive secondary schools, as soon as they are established. This will help to distribute the traning to the geographic areas where it is needed. This possibility argues for acceleration of the secondary school program.
>
> 2. More specific technical training also will be needed; the UNESCO team recommended the establishment of five special institutes of health, agriculture, home economics, engineering and polytechnics to provide higher level intensified training. These institutions could be associated with colleges for the respective subjects, but would not offer work of college level. Present technical training programs in these fields would be absorbed by the proposed insitutions.
>
> 3. Technical training should be better coordinated, perhaps by the Minister of Education. Each of the five proposed institutions might be administered jointly by the appropriate technical ministry and the Ministry of Education.
>
> 4. Enrollment in these programs should be controlled by manpower needs, and this requires the establishment of a Manpower Board to continuously survey and evaluate needs in the labor force.
>
> 5. The UNESCO team noted considerable attrition in some of the present programs for training specialized personnel, but believed this could be corrected by consolidation and coordination of the programs, and the establishment of manpower survey facilities as suggested above.

Finally, the team recommended a study of the possibilities of making greater use of the Gurkha training and the terminal training facilities of the Indian armies. During the final 6–12-month training period, the Gurkhas could be advised of manpower needs in Nepal and trained for productive life after military retirement.

There is still a shortage of technically trained personnel in Nepal, and this will become more severe unless the program is expanded. One general technical institute is now under construction. Foreign scholarships will continue to be used, and eventually, technical colleges will be established. But there must be widespread technical and vocational education at the secondary level as well.

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[43] See Wood and Knall, *op. cit.*, p. 58–63.

X. Adult Education

At the close of the Rana period (1951), literacy in Nepal was estimated to be about two percent of the population. Although there had been some efforts as early as 1947 to develop adult education, the first serious consideration of the problem came in 1953. Late in that year, Dr. Frank Laubach, of the World Literacy Foundation, was brought to Kathmandu to supervise the preparation of basic literacy readers. The National Education Planning Commission in 1954 included adult education in its list of major goals. It stated that adult literacy courses were second only to primary education in importance, but called for other forms of adult education, as well. It recommended:[44]

1. the establishment of classes in agriculture, homemaking, and handicrafts
2. the development of the fine and cultural arts
3. the widespread distribution of good literature
4. the broadening of civic knowledge.

As specific targets, the Commission suggested the training of 100,000 new literates by 1960, and a program for training 100,000 per year by 1965. It also recommended the establishment of other adult education classes, village libraries, and village radios—all to be available by 1965.

To support the literacy program, it was agreed that the normal school course for primary school teachers would include skills in teaching literacy classes, and that new teachers would be encouraged to open literacy classes for the parents of their primary school pupils. Teachers who taught evening literacy classes were to receive about 25 percent additional pay. Materials were to be furnished free. As a result of early efforts, basic readers, advanced readers, two series of pamphlets in health and agriculture, and a fortnightly literacy newspaper were prepared. Since 1959, additional materials in social studies, literature, and arithmetic have been produced by the Educational Materials Organization.

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[44] See Pandey, Bahadur, and Wood, *op. cit.*, p. 151–160, for the Commission's recommendations. For additional material on adult education, see Wood and Knall, *op. cit.*, p. 63–69.

The program developed very effectively in many areas of the country, but lack of funds curtailed rapid expansion. By 1961, slightly less than 50,000 persons had received literacy training in some 1,900 classes. Nearly half a million pamphlets, charts, and newspapers had been printed, an average of 10 pieces per student. During the same period (1953–61) about 150 village libraries were opened. A "School of the Air" program was developed for broadcasting by the government radio station (the only one in the country), but very few schools had access to receiving sets.

As pointed out in the previous section, training of specialists in health, agricultural, homemaking, and cottage industries was underway by 1954, and these persons carried adult education of various types to about 1,000 communities by 1961. They have made an impressive record in the improvement of village sanitation and malaria eradication, in the introduction of newer farming methods, better diets, and cleaner homes, and the development of small industries.

In 1962, considerable impetus was given to the development of the panchayat, or village council system. Training in civic leadership was provided, and the panchayats were asked to take over responsibility for village improvement, including adult education.

The UNESCO team in 1962 noted that the several programs in adult education were being administered by various ministries without effective coordination. To correct this, and to permit a more rapid development in this area of education, the team recommended the establishment of an Adult Education Coordinating Committee, representative of the various ministries, and the appointment of a Coordinator of Adult Education to administer the total program. Under this arrangement, the Coordinator would be attached to the Ministry of Education.

Adult education is essential to Nepal's economic development. While a sound program has been inaugurated, there is a need to expand it and effect a better integration of the component parts.

XI. Summary

Nepal is a relatively small, developing country lying in the heart of Asia on the backbone of the Himalayas. Her strategic location as a buffer state between two giants, India and China, has dominated her history for centuries, and may well determine her future.

Since Nepal is apparently not well endowed with natural resources, the country's wealth is found mainly in the capabilities of her people. Thus, investment in the improvement of human resources—in education—becomes imperative to the economic growth and political development of the nation.

Released from the bondage of autocracy in 1951, Nepal today is forging ahead, with the substantial help of foreign aid. Education has been accepted as a state responsibility and a fundamental right of each individual. The central government is strengthening its administration and supervision of education, while at the same time laying the groundwork for the assumption of greater local responsibility.

The expansion of education is, and will be for some time, limited by the availability of economic resources. At present, goals and targets seem to be more ambitious than foreseeable resources will permit. But plans have been carefully laid for universal primary education, sound vocationally oriented secondary education, a national university, and widespread adult education. Encouraging progress is being made toward these goals. (See appendix B.)

The educational program that is developing in Nepal has many indigenous features; it suffers less than in many developing countries from imported influences. The National Education Planning Commission suggested the program diagramed in appendix C, and educational planners today seem to be following this lead, as least for the common schools. Universal 5-year primary education is conceived as basic training on which further education can be built as needed. A 5-year secondary school will offer training in occupational skills and preparation for college and technical training. Advanced technical training will be available; a national university will provide professional training; and extensive adult education will round out the program.

Nepal is not without problems in the field of education. Her financial resources are limited and she is heavily dependent upon foreign aid. There is some imbalance: for example, secondary and adult education lag while higher education exceeds the immediate needs; the examination system creates severe wastage at the secondary and college levels; technical education is poorly coordinated; there is a shortage of teaching materials, and some obsolescence of methods. But these problems can be solved if economic aid is continued for a few years, until the investment in human resources can begin to "pay off."

Some of the problems have been solved: for example, teacher education has been taken to the hinterlands with mobile normal school teams; primary school teachers have been trained to teach adult literacy classes; learning materials have been improved, etc. Some of the problems—e.g., dropouts and wastage, imbalance, lack of funds for adequate supervision—may remain for some time, as they have in well developed countries. But education is on the march in Nepal; the "vicious circle" in economic development is being broken by investment in education.

Selected Bibliography

"An Act Promulgated for the Establishment and Organization of a Teaching and Affiliating University." *The Nepal Gazette*, June 8, 1959. 32 p.

Outlines details for Tribhuvan University.

BYRNE, CHARLES D. "What Type University for Nepal." *Education Quarterly*, 1: 54–61, June 1957.

Criteria and recommendations for establishing a national university.

Courses of Study for the School Leaving Certificate. Kathmandu: The Controller of Examinations, Department of Education, Government of Nepal, 1957. 64 p.

Lists the "papers" required for the examination, and outlines the scope of information and skills to be required for each.

"A Curriculum for the Schools of Nepal." *Education Quarterly*, 1: 67–78, June 1957.

Some details of the proposal made by the National Education Planning Commission in 1954.

Education Quarterly. Kathmandu: Bureau of Publications, College of Education, 1957—.

Professional magazine containing proposals, reports, and discussions of various aspects of education in Nepal. Contributions of special significance have been listed separately in this bibliography; others have also been referred to in the text. Still other articles will be found useful for more specific developments in education.

The Five-Year Plan for Education in Nepal. Kathmandu: Bureau of Publications, College of Education, 1957. 39 p.

Detailed outline, based on the National Education Planning Commission's Report. Part of the country Five-Year Plan.

KHANAL, Y. N. "A University for Nepal." *Education Quarterly*, 1: 51–3, 114–19, June, September 1957.

Outlines a plan for a national university.

Manual for Training Teachers in Nepal. Kathmandu: Bureau of Publications, College of Education, 1956. 71 p. (Also Eugene, Oreg.: American Nepal Education Foundation.)

Outline of the curriculum for training primary school teachers.

PANDEY, RUDRA RAJ; BAHADUR, KAISHER, K. C.; and WOOD, HUGH B. (Eds.). *Education in Nepal: Report of the National Education Planning Commission.* Kathmandu: Bureau of Publications, College of Education, 1956. 259 p. (Also Eugene, Oreg.: American Nepal Education Foundation.)

Basic educational planning document for Nepal. Surveys status of education in 1954; maps immediate and long-range plans for the future.

[SHARMA, KULASHEKAR] *Primary Education in Nepal.* Kathmandu: Ministry of Education, His Majesty's Government, 1962. 11 p.

Enrollment and cost projections by the Secretary of Education for the UNESCO Tokyo conference, April 1962.

SUBBA, RANDHIR; UPRAITY, TRAILOKYA NATH; and WOOD, HUGH B. "Report on the Ministry of Education." *Education Quarterly*, 2: 123–32, September 1958. (Summary appears in: Heath, Kathryn G. *Ministries of Education: Their Function and Organization.* Washington: U.S. Government Printing Office, 1962. p. 443–51.)

Historical background and present organization and functions.

"Symposium: Educational Progress in Nepal." *Education Quarterly,* 3: 1-77, June, September, 1959.

Describes educational developments 1953–59, with special emphasis on projects aided by University of Oregon/International Cooperation Administration contract personnel.

Upraity, Trailokya Nath. *Financing Elementary Education in Nepal.* Eugene, Oreg.: American Nepal Education Foundation, 1962. 330 p. (Doctoral dissertation, University of Oregon).

Comprehensive analysis of several plans; historical background; description and analysis of present developments in education.

Wood, Hugh B. *Conclusions and Recommendations.* Kathmandu: Bureau of Publications, College of Education, 1959. (Also Eugene, Oreg.: American Nepal Education Foundation.)

Based on 8 years of educational development; a look to the future.

———. "Development of Education in Nepal." *Educational Leadership,* 16: 429–33, April 1959.

Descriptive.

———. *Education in Nepal.* Eugene, Oreg.: American Nepal Education Foundation, 1958. 84 p.

Collection of reprints.

———. *Educational Statistics for Nepal.* Eugene, Oreg.: American Nepal Education Foundation, 1962. 15 p.

Summary of educational statistics from the UNESCO report by Wood and Knall, cited below.

———. "Mobile Normal Schools in Nepal." [unpublished manuscript]

Descriptive; cites accomplishments.

———. "Problems of Educational Planning in Nepal." [unpublished manuscript]

Analysis, based on author's 6 years of experiences as educational adviser in Nepal.

———. "Stretching Your Foreign-Aid Dollar," [unpublished manuscript] [to be published in *Public Administration Review*]

Evaluates contract and direct-hire approaches to foreign technical assistance; many illustrations from Nepal.

Wood, Hugh B., and Knall, Bruno. *Educational Planning in Nepal and Its Economic Implications.* Paris: UNESCO, 1962. 143 + 38 p. (mimeo; restricted distribution)

Report of the UNESCO Mission to Nepal, January–May, 1962, to survey a decade of educational development and make recommendations for future developments.

Wood, Hugh B. *et al.* *Six Years of Educational Progress in Nepal.* Kathmandu: Bureau of Publications, College of Education, 1959. 76 p. (Also published in Eugene, Oreg., by American Nepal Education Foundation.)

Pictorial and graphic report of educational program, 1953–59, aided by the University of Oregon/International Cooperation Administration contract personnel.

A Working Plan for the Provision of Universal, Compulsory, and Free Primary Education in Nepal. Paris: UNESCO, 1961. 26 p.

Country extension of the "Karachi plan" for educational development in Asia; outlined in *The Needs of Asia in Primary Education* (Paris: UNESCO, 1961, 60 p.)

APPENDIXES

A. List of Institutions of Higher Education in Nepal

B. Enrollment in Educational Programs in Nepal

C. Proposed Educational Pyramid for Nepal

Appendix A

List of Institutions of Higher Education in Nepal[1]

Name and location	Year founded	Type	Number of staff members	Number of students
UNIVERSITY:				
Tribhuvan University, Kathmandu	1959	Postgraduate only	32	260
PROFESSIONAL:				
Law College, Kathmandu	1954	Postgraduate, 2-year	8	181
College of Education, Kathmandu	1956	Degree	27	150
Pub. Commerce College, Kathmandu	1958	Degree (night)	14	253
College of Music, Kathmandu	--------	Degree	4	25
LIBERAL ARTS & SCIENCE:				
(Kathmandu Valley)				
Tri Chandra College, Kathmandu	1918	L.A., Sc., Com. Degree	72	(L.A.)383 (Sc.) 640 (Com)527
Sanskrit College, Kathmandu	1948	Degree, postgraduate	16	142
Padma Kanya College, Kathmandu	1951	L.A. Degree	16	306
Nepal National College, Kathmandu	1951	L.A. Degree (night)	23	385
Durbar College, Kathmandu	1952	L.A. Degree	9	156
Patan College, Patan	1954	L.A. Degree	17	215
Public Science College, Kathmandu	1956	Sc. Intermediate	8	303
Bhaktapur Intermediate College, Bhatgoan	1959	L.A. Intermediate	9	52
Saraswati Intermediate College, Kathmandu	1959	L.A. Intermediate	16	86
Ratna Rajya Laxmi College, Kathmandu (Girls)	1961	L.A. Intermediate	15	62

See footnote at end of table.

Appendix A–Cont.

Name and location	Year founded	Type	Number of staff members	Number of students
(East Nepal)				
Mahendra Degree College, Dharan	1955	L.A., Com. Degree	14	107
Dhankuta Degree College, Dhankuta	1955	L.A. Degree	7	36
Morang College, Biratnagar	1956	L.A., Sc., Com. Degree	26	206
Janakpur Degree College, Janakpur	1958	L.A. Degree	7	141
Sanskrit College, Dharan	--------	Sansk. Degree	19	168
Bhola Intermediate College, Chainpur	1960	L.A. Degree	4	22
Mahendra Ratna College, Illam	1960	L.A. Degree	4	26
(West Nepal)				
Mahendra Bindeswari College, Rajbiraj	1957	L.A., Sc. Degree	8	74
Tribhuvan Degree College, Tansen	1958	L.A. Degree	10	55
Shri MBB Shah College, Ghorahi (Dang)	1959	L.A. Degree	6	6
Sanskrit College, Dang	--------	Sansk. Degree	--------	--------
Prithivi Narayan Intermediate College, Pokhara	1960	L.A., Intermediate	5	26
Narayan Intermediate College, Nepalgunj	--------	L.A., Sc., Intermediate	12	90
Kapil Bastu Intermediate College, Taulihawa	--------	L.A. Intermediate	--------	--------
Chuhan Hill Intermediate College, Chuhandada (West No. 3)	--------	L.A. Intermediate	--------	--------
(Central Nepal)				
Thakur Ram Degree College, Birgunj	1952	L.A. Degree	13	85
TOTAL			[2] 417	[2] 5,143

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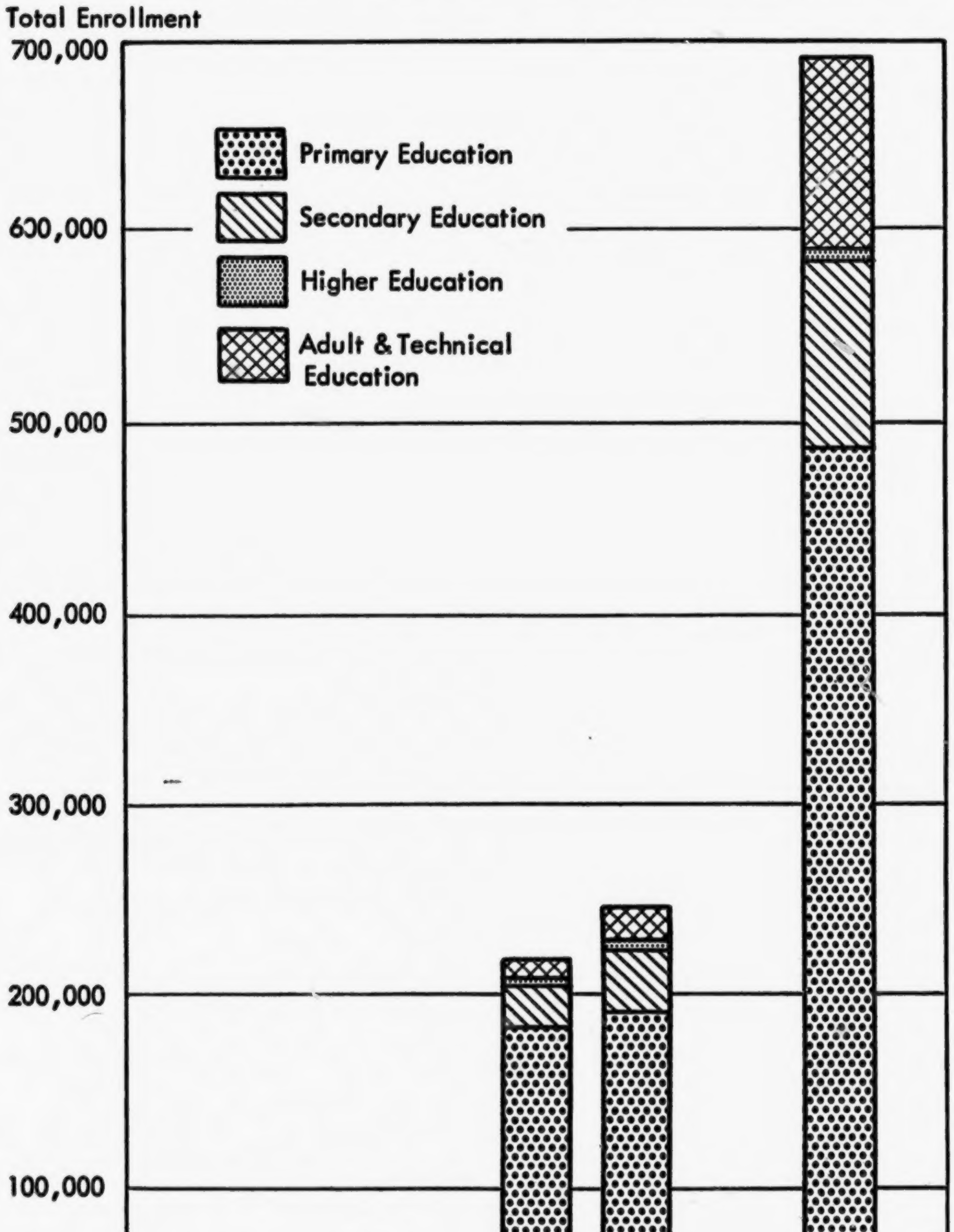
[1] Based on 1961 Committee Report. Kathmandu: Ministry of Education—unpublished, p. 35-36; corrected from revised data submitted by institutions. Blanks indicate data not available.

[2] Incomplete totals.

Appendix B

Chart II. Enrollment in Educational Programs in Nepal



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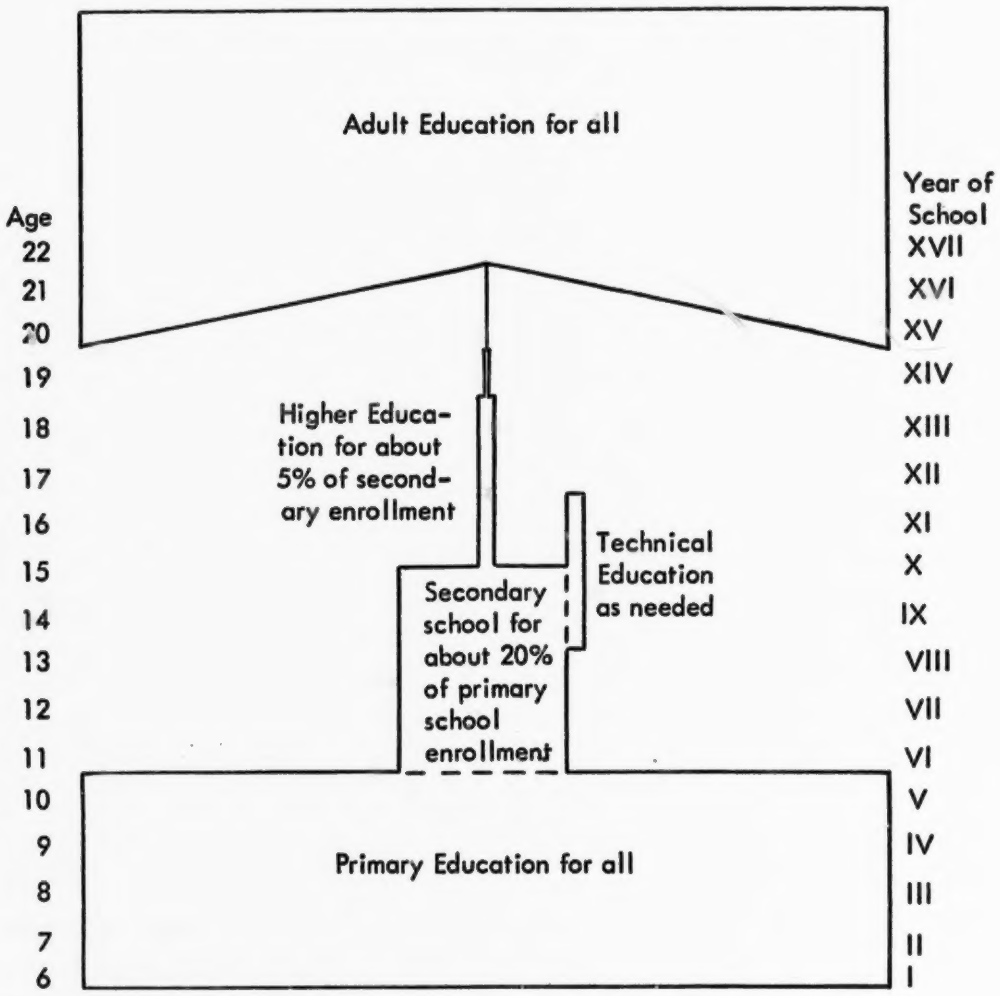
[1] Projected enrollments as recommended in Wood and Knall, op. cit.

Appendix C

Chart III. Proposed Educational Pyramid for Nepal


Adult Education for all
Age
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
Year of School
XVII
XVI
XV
XIV
XIII
XII
XI
X
IX
VIII
VII
VI
V
IV
III
II
I
Higher Education for about 5% of secondary enrollment
Technical Education as needed
Secondary school for about 20% of primary school enrollment
Primary Education for all

[1] Adapted from Pandey, Bahadur, and Wood, op. cit., p. 83.

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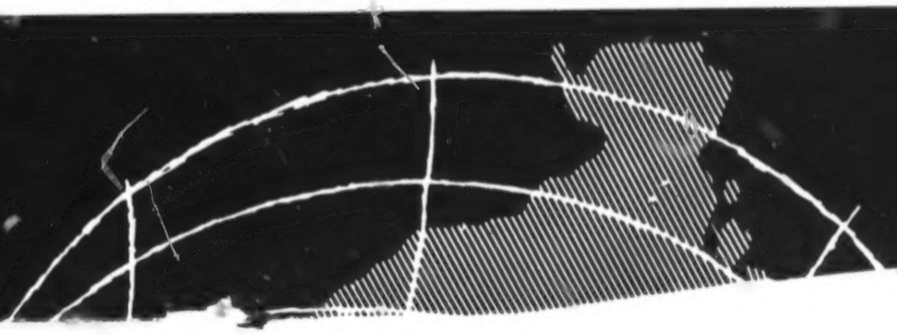

VT 005 186
Sukrasep, Kanchana
Changes, Modernization, New Courses, and Developments in Agricultural Education in California High School-1965.

California State Polytechnic Coll., San Luis Obispo. Dept. of Agricultural Education
California State Dept. of Education, Sacramento. Bureau of Agricultural Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jul66 26p.

STATE SURVEYS; *VOCATIONAL AGRICULTURE; *COURSES; HIGH SCHOOLS; *CURRICULUM DEVELOPMENT; IMPROVEMENT
CALIFORNIA

A survey was conducted to determine what new courses and developments had occurred in agricultural education in California public high schools before and after 1961. A two-part survey form was sent to the director of agriculture in each of the high schools. The first part dealt with course changes that have been conducted for more than five years. The second section consisted of a description of new courses. Data were compiled and categorized according to total school enrollment. Some findings were; (1) Nearly one-half of the schools have changed course titles which most frequently included the words science, ornamental horticulture, management, and business, (2) About one-half of the schools indicated a change in the primary purpose or objectives while nearly three-fourths indicated changes in course content, (3) One-third of the schools reported changes in financial support primarily due to 1963 Vocational Education Act funds, and (4) 66 of the 118 schools which responded offered 110 new courses. The appendixes list new titles for courses begun prior to 1961 and after 1961. (WB)

VT005186

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A SURVEY

"CHANGES, MODERNIZATION, NEW COURSES, AND DEVELOPMENTS IN AGRICULTURAL EDUCATION IN CALIFORNIA HIGH SCHOOL - 1965"

A NON-THESIS STUDY CONDUCTED BY THE AGRICULTURAL EDUCATION DEPARTMENT, CALIFORNIA STATE POLYTECHNIC COLLEGE, SAN LUIS OBISPO, CALIFORNIA - WINTER QUARTER, 1965. IMPLEMENTED AND SUMMARIZED BY MISS KANCHANA SUKRASEP, GRADUATE STUDENT.

CO-SPONSERED BY

BUREAU OF AGRICULTURAL EDUCATION

July, 1966

.005186

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Chapter I

INTRODUCTION

This survey was undertaken to acquire specific information regarding changes--modernization, new courses, and developments--which are taking place in agricultural education in the public high schools of California. It was co-sponsored by the State Bureau of Agricultural Education and the Agricultural Education Department, California State Polytechnic College, San Luis Obispo.

No definite or complete information had previously been obtained relative to changes which had been taking place in the nature and scope of agricultural education in California public high schools. It was assumed that the information obtained would be of valuable reference both in pre-service and in-service education in California.

The survey and report was undertaken by Kanchana Sukrasep, a graduate student in Agricultural Education at Cal Poly, as a non-thesis problem for Ag Ed 580, Special Problems in Agricultural Education.

In developing the questionnaire, the writer surveyed current periodicals for the latest procedures used in teaching agriculture. Then Mr. H. H. Burlingham, Chairman, Department of Agricultural Education, D. W. Shirley, Assistant Professor, and the writer conferred and identified the questions most valuable. The final form of the survey was sent to the Director of Agriculture in each of the public high schools in California.

The survey is divided into two sections. The first one deals with changes in on-going courses--courses that have been conducted for more than five years. The second section consists of descriptions of new courses. A separate questionnaire was provided for each new course.

The data received was compiled and categorized according to the total school enrollment.

The summarized results are found in Chapter II. Conclusions are found in Chapter III.

Chapter II

FINDINGS

The results of the replies to the survey are summarized in this chapter according to the order of the questions asked on the survey. Details are placed in the Appendix. Percentages are rounded off to the nearest whole.

Replies to the questionnaire were organized into groups according to total school enrollment.

TABLE No. 1

TOTAL STUDENT ENROLLMENT IN SCHOOLS OFFERING AGRICULTURE

Group	Total School Enrollment	Number of Schools	% Each Group
I	1-500	12	10
II	501-1000	16	14
III	1001-1500	26	22
IV	1501-2000	30	25
V	2001-up	34	29
TOTAL		118	100

TABLE No. 2

AGRICULTURE ENROLLMENT IN RELATION TO SCHOOL SIZE

Number of Agriculture Students Enrolled	Number of Schools According to Enrollment Group						
	I	II	III	IV	V	Total	%
1 - 25	1	-	1	-	1	3	2
26 - 50	5	1	1	2	2	11	10
51 - 75	5	6	7	7	8	33	28
76 - 100	-	5	7	8	4	24	20
101 - 125	1	2	2	7	6	18	15
126 - 150	-	-	5	4	4	13	11
151 - 175	-	1	3	1	4	9	8
176 - 200	-	-	-	-	2	2	2
201 - 225	-	1	-	-	-	1	1
226 - 250	-	-	-	1	2	3	3
251 - 275	-	-	-	-	-	0	0
276 - 300	-	-	-	-	1	1	1
TOTAL	12	16	26	30	34	118	100

TABLE No. 3

CLASS LEVEL OF SCHOOL BY GROUP

Item	I	II	III	IV	V	Total	%
4 year program	12	15	20	16	9	72	61
3 year program	-	-	5	5	16	26	22
Junior high school	-	-	1	9	8	18	16
Other	-	1	-	-	1	2	2
TOTAL	12	16	26	30	34	118	100

SECTION I OF SURVEY--ON-GOING COURSES

This section surveyed changes in courses that have been conducted for more than five years.

QUESTION 1: Change in Course Titles or Designations

Respondents were asked to answer yes or no if there had been changes and to list any new course titles.

TABLE No. 4

Item	Groups					Total	%
	I	II	III	IV	V		
Change	5	8	13	13	14	53	46
No Change	7	8	13	17	19	64	54
No Answer	-	-	-	-	1	1	1
TOTAL	12	16	26	30	34	118	100

TABLE No. 5

THE TEN MOST FREQUENTLY MENTIONED NEW TITLES*

New Titles	Frequency					Total
	I	II	III	IV	V	
Animal Science	2	2	2	5	-	11
Farm Management	2	2	1	3	1	9
Agriculture	-	-	-	3	4	7
Plant Science	1	2	1	3	-	7
Agricultural Science	1	-	4	1	-	6
Ornamental Horticulture	-	-	1	3	1	5
Agricultural Business	1	-	-	2	2	5
Horticulture	-	-	1	1	2	4
Floriculture	-	-	1	1	2	4
Agricultural Mechanics	-	1	1	2	-	4

*For a complete list see Appendix A.

QUESTION 2: Changes in Primary Purpose or Objectives of the Course.

Respondents were requested to answer yes or no and to list new purposes. The purposes are summarized in Table No. 6 with the described changes in course content in Table No. 7.

TABLE No. 6

CHANGES IN PURPOSE OR GOALS

Item	Groups					Total	%
	I	II	III	IV	V		
Change	5	9	11	15	15	55	47
No Change	6	6	15	15	18	60	51
No Answer	1	1	-	-	1	3	3
TOTAL	12	16	26	30	34	118	100

QUESTION 3: Changes in Course Content.

TABLE No. 7

Item	Groups					Total	%
	I	II	III	IV	V		
Change	10	11	21	22	19	83	70
No Change	2	5	5	7	14	33	28
No Answer	-	-	-	1	1	2	2
TOTAL	12	16	26	30	34	118	100

Combining information from questions two and three: the changed in emphasis are summarized on the following page.

TABLE No. 8

IDENTIFIED CHANGES IN PURPOSE, OBJECTIVES AND CONTENT

Description	Number of Schools Reporting Changes
"More Specific Occupational Objectives"	11
"More General"	13
"College Preparatory"	9
"Vocational--from Non-Vocational"	10
"Agricultural Science"	24
"Business and Related Occupations"	34
"Skills to Management"	1
"More Practical and Applicable"	8
"Horticulture to Plant Science"	18
"New, Modern and Use of Visual Aid"	1

The total of indicated changes in purpose and content in the above table is not the same as the total of the schools because several schools indicated more than 1 change.

QUESTION 4: Changes in Kinds of Students Enrolled.

The respondents were asked to check kinds of students enrolled, if any changes had occurred.

TABLE No. 9

Item	Groups					Total	%
	I	II	III	IV	V		
Change	9	9	13	13	12	56	48
No Change	3	7	13	17	21	61	52
No Answer	-	-	-	-	1	1	
TOTAL	12	16	26	30	34	118	100

TABLE No. 10

CHANGE REPORTED

Kinds of Students	Groups					Total	%
	I	II	III	IV	V		
Girls	7	5	11	9	11	43	36
Non-Farm Students	8	9	12	12	11	52	44
College-Bound Students	7	8	12	10	12	49	42

QUESTION 5: Changes in Time (class) Requirements.

TABLE No. 11

Item	Groups					Total	%
	I	II	III	IV	V		
Change	11	6	12	7	9	45	38
No Change	1	9	13	22	23	68	58
No Answer	-	1	1	1	2	5	4
TOTAL	12	16	26	30	34	118	100

Respondents were asked to describe or show old and new time schedules. The replies are summarized by group.

GROUP I: (7 schools reporting) Four changes were from double to single period requirements. Two changed Ag Mechanics from a required course to an optional one. One changed from double periods to three or four periods, at the student's option.

GROUP II: (7 schools reporting) In two schools, double periods are required for all except college preparatory students. One changed from a period of general agriculture to two single periods of Vocational Agriculture. Two schools made Agricultural Mechanics classes optional, although most of the vocational students continued taking the Agricultural Mechanics. Two other schools anticipated changes from single to double periods for the year 1966-1967.

GROUP III: (9 schools reporting) Three schools recommend double periods but they are not required. Two schools once had consecutive periods but do not now. Double periods are still required by two of the schools; however, one school has double period for Agriculture III and IV only. Another school has two periods each of Ag Science II - IV as well as two periods of Ag Mechanics II and one of Ag Mechanics III.

GROUP IV: (7 schools reporting) Agricultural Mechanics and Agriculture Science are separate, one period classes in six schools, and the students may take either or both. One school changed Horticulture III from a one hour class to a two hour class.

GROUP V: (9 schools reporting) Two schools changed from double periods to single ones. One school allows only college preparatory students to take a single period for four years. One has strictly a one hour a day schedule. Five schools use combinations of single and double periods.

QUESTION 6: Changes in Financial Support.

The respondents were asked for changes in financial support for their program, and to check the source of the funds, if changed.

TABLE No. 12

Item	Groups					Total	%
	I	II	III	IV	V		
Change	3	5	10	11	6	35	30
No Change	9	10	16	19	26	80	68
No Answer	-	1	-	-	2	3	3
TOTAL	12	16	26	30	34	118	100+

TABLE No. 13

CHANGES IN SOURCE OF FUNDS

Item	Groups					Total
	I	II	III	IV	V	
From local-state, to local-state-Smith Hughes and George Barden funds	-	1	-	1	-	2
From local-state, to local-state-Smith Hughes and George Barden-VEA '63 funds	-	2	1	2	-	5
From local-State-S.H.& G.B., to Local-State-S.H.&G.B.-VEA '63 funds	3	3	9	9	6	30
TOTAL	3	7	10	12	6	38*

*35 different schools reported 38 changes

QUESTION 7: Change in Facilities and/or Equipment.

The respondents were to indicate yes or no, and if yes to describe the changes.

TABLE No. 14

Item	Groups					Total	%
	I	II	III	IV	V		
Change	7	10	17	13	10	57	48
No Change	4	5	9	15	22	55	47
No Answer	1	1	0	2	2	6	5
TOTAL	12	16	26	30	34	118	100

How Changes Were Provided--

GROUP I: One improved its land and laboratory facilities. Another established a welding set up. One built a greenhouse, and one built a new classroom and shop in addition to obtaining VEA '63 welding equipment. Farm and Farm Mechanics facilities were given up by one school which is now receiving local help. VEA '63 funds were used for the expansion of O. H. facilities in one school while another one improved, repaired, and purchased supplies and equipment besides restoring its shop and classrooms.

GROUP II: Six schools acquired new horticulture facilities and equipment, three from VEA '63. Four schools improved their farm shops and received new Agricultural Mechanics equipment. One of these was financed through VEA '63, and the rest were financed locally.

GROUP III: Facilities were improved in six schools, four through VEA '63. New shops and welding equipment were obtained by six schools, four with VEA '63 assistance. In two schools with local help the entire facility has been expanded, but in another classroom space has been cut down making the facilities inadequate. VEA '63 funds provided modern office equipment, files, cabinets, and extra tools for one school. Two schools were able to add labatories. One with local help and the other with VEA '63 funds were able to hire full time farm managers. VEA '63 funds provided one school with equipment for a meat cutting and butchering laboratory.

GROUP IV: Eight schools either built greenhouses or purchased new equipment for use in O. H. classes. Six of the eight projects were under VEA '63. One school built a new agriculture classroom and shop. New facilities for crops and livestock were constructed and financed locally by one school. Three schools were able to make improvements in equipment and tools; two through VEA '63, and one locally. One school fenced in areas with local aid while another was given a pick-up truck as a donation.

GROUP V: VEA '63 provided drafting equipment for teaching landscape design to two schools. VEA '63 made hand tools, power tools, tractors, power mowers, and spray rigs available to two schools. VEA '63 also helped a school to add a mist system for developing skill in turf and nursery management. Improvements such as field plots and animal facilities were constructed in four schools with local funds. One school built an O. H. unit with school district money.

QUESTION 8: Other pertinent changes in or Modernization of On-Going Program.

TABLE No. 15

Item	Groups					Total	%
	I	II	III	IV	V		
Yes	3	7	10	9	10	39	33
None	2	8	16	19	21	66	56
No Answer	7	1	-	2	3	13	11
TOTAL	12	16	26	30	34	118	100

The replies are summarized by group:

GROUP I: One school is starting instruction in showing and judging livestock, one is teaching the students how to keep IBM production records, and one is building a Vocational Skills Center which will have an agriculture classroom and equipment.

GROUP II: Seven schools are carrying out modernization programs. Teachers from three of the schools are doing vocational counseling and helping students to find part time jobs. One school is putting less emphasis on production agriculture and supervised farming programs. One is increasing the amount of O. H. taught. Two are revising their curricula.

GROUP III: Two are trying to acquaint the students with job opportunities in agriculture and to assist them in job placement. One school reported a decrease in financing and materials and supplies available for instruction. Two schools are getting increased local support. Three have improved their school farms and added modern equipment to their farm shops. One school has organized a course in agriculture arts for students not in Vocational Agriculture, and two are investigating the effectiveness of teacher aids and teaching machines.

GROUP IV: Five schools are emphasizing production agriculture by building new facilities for crops and livestock projects. One school has combined metal and mechanics class with agricultural mechanics. Another is offering a separate course in O. H. One has hired a vocational counselor and formed an advisory committee. One school is starting to use saran and plastic houses.

GROUP V: Four schools, are placing more emphasis on O.H. and landscaping, two of the schools with VEA '63 funds, one school has night classes in welding and Farm Management. Work experience programs, summer programs, and county-wide supervised projects are offered by three different schools. One school added general agriculture classes several years ago, and another has a counselor's orientation visiting day and discussion period for the agriculture department.

SECTION II: NEW COURSES

The purpose of this section was to gain information about courses started since 1961. A separate questionnaire was provided each school for each new course.

TABLE No. 16

Item	Groups					Total	%
	I	II	III	IV	V		
Not offering new courses	6	8	8	13	17	52	44
Offering New Courses	6	8	18	17	17	66	55
Number of new courses offered	13	11	34	28	24	110	
TOTAL	12	16	26	30	34	118	100

QUESTION A: Course Title

The respondents were asked to give the course title of new courses. The most frequently mentioned new course titles were:

TABLE No. 17

Course Title	Frequency					Total
	I	II	III	IV	V	
Ornamental Horticulture	-	6	4	5	6	21
Agricultural Business	1	1	1	1	2	6
Vocational Horticulture	-	1	1	1	3	6
General Agriculture	-	-	5	-	-	5
Floriculture	-	-	1	3	1	5
Plant Science	1	-	1	2	-	4
Farm Management	1	2	-	-	-	3
Agricultural Construction	1	-	1	1	-	3
Animal Husbandry	-	-	1	-	1	2
Surveying	-	-	1	-	1	2

A complete list is given in Appendix B.

QUESTION B: Year new courses were started.

Respondents were asked to indicate the year new courses were started.

TABLE No. 18

Year	Groups					Total	%
	I	II	III	IV	V		
Offered in 1961	-	-	2	3	1	6	5
1962	1	-	2	1	-	4	4
1963	2	3	4	8	2	19	17
1964	7	4	12	3	9	35	32
1965	3	3	11	12	10	39	35
Others	-	1 (1966)	1 (1966)	-	1 (1960)	3	3
No Answer	-	-	1	2	1	4	4
TOTAL	13	11	34	28	24	110	100

QUESTION C: Primary Purpose of New Courses.

The respondents were asked to check the primary purpose of the new courses.

TABLE No. 19

Purpose	Groups					Total
	I	II	III	IV	V	
Exploratory (pre-vocational)	5	6	10	6	13	40
To Prepare for Job Entry	10	4	11	21	16	63
To Prepare for continuing Technical Training	8	2	14	8	10	42
To Prepare for College	5	1	5	13	6	30
No Answer	-	1	1	-	-	

QUESTION D: Students Who May Enroll.

The respondents were asked to check the kind of students who may enroll in the new courses.

TABLE No. 20

Sex	Groups I	II	III	IV	V	Total	%
Boys	3	3	6	6	6	24	22
Girls	-	-	1	4	1	6	5
Both	8	8	27	18	17	78	71
No Answer	2	-	-	-	-	2	2
TOTAL	13	11	34	28	24	110	100

TABLE No. 21

Future Goal	Groups I	II	III	IV	V	Total	%
Terminal Students Only	1	1	1	3	2	8	7
College-bound Students Only	-	-	-	-	1	1	1
Both	11	10	25	22	19	87	79
No Answer	1	-	8	3	2	14	13
TOTAL	13	11	34	28	24	110	100

TABLE No. 22

NEW COURSES AVAILABLE TO STUDENTS

Grade Level	Groups I	II	III	IV	V	Total	%
7	-	-	-	3	1	4	-
8	-	-	2	3	3	8	-
9	2	4	15	7	10	38	-
10	7	7	24	10	16	64	-
11	13	10	27	16	19	85	-
12	13	11	27	17	20	88	-
No Answer	-	-	1	1	1	3	-

TABLE No. 23

HOW STUDENTS ARE SELECTED OR ENROLLED

	Groups					Total	%
	I	II	III	IV	V		
By Student Choice	6	11	18	26	20	81	-
Approved by the Agriculture Teacher	8	4	13	15	15	55	-
By School Counselor	3	6	25	14	13	61	-
No Answer	-	-	-	-	-	-	-

QUESTION E: Length of Instructional Period (Number of Periods Per Day)

The respondents were to check the number of periods per day for each new course.

TABLE No. 24

Offering	Groups					Total	%
	I	II	III	IV	V		
1 period/day	11	10	32	25	20	98	89
2 periods/day	1	1	2	2	3	9	8
3 periods/day	1	-	-	1	-	2	2
4 periods/day	-	-	-	-	1	1	1
No Answer	-	-	-	-	-	-	-
TOTAL	13	11	34	28	24	110	100

QUESTION F: Length of Time Course is Offered.

The respondents were asked to fill in the number of weeks each course is taught. The response was tabulated by semester, however, because the replies were given in weeks per semester.

TABLE No. 25

Offering	Groups					Total	%
	I	II	III	IV	V		
1 semester	2	1	4	3	10	20	18
2 semester	10	10	30	23	12	85	77
4 semester	-	-	-	2	-	2	1
No Answer	1	-	-	-	2	3	3
TOTAL	13	11	34	28	24	110	100

QUESTION G: Amount of Credit (Units) Offered.

The respondents were asked to fill in the amount of credit offered per hour of instruction per year. These data have not been reviewed. It appears there may have been varying interpretations of the question.

TABLE No. 26

	Groups					Total	%
	I	II	III	IV	V		
1 unit/hour/year	2	-	3	-	-	5	5
5 unit/hour/year	1	1	3	4	11	20	18
10 unit/hour/year	9	8	22	22	11	72	65
20 unit/hour/year	-	-	4	-	-	4	4
Others	-	1	1	1	2	5	5
		(3/1/1)	(3/1/1)	(10/3/1)	(5/2/1) (10/4/1)		
No Answer	1	1	1	1	-	4	4
TOTAL	13	11	34	28	24	110	100

QUESTION H: Time of Year.

The respondents were asked to check the time during the school year that each course was offered.

TABLE No. 27

Courses	Groups					Total	%
	I	II	III	IV	V		
Full School Year	13	8	33	28	21	103	94
Fall Semester Only	-	-	-	-	-	0	0
Spring Semester Only	-	1	1	-	2	4	4
In Summer Only	-	2	-	-	1	3	3
TOTAL	13	11	34	28	24	110	100

QUESTION I: Are Special Teachers Employed to Teach This Course?

The respondents were asked to indicate yes or no, and if yes to indicate the credential held.

TABLE No. 28

	Groups					Total	%
	I	II	III	IV	V		
No Special Teacher Employed	8	7	20	24	18	77	70
Special Teacher Employed	5	3	11	4	5	28	25
No Answer	-	1	3	-	1	5	5
TOTAL	13	11	34	28	24	110	100

QUESTION J: Other instruction areas within the school directly involved in the instruction.

The respondents were asked to check the name of the course listed. Some courses involved more than one instructional area.

TABLE No. 29

Areas Involved	Groups I	II	III	IV	V	Total
Home Economics	1	1		3	1	6
Industrial Arts	-	2	1	3	4	10
Business	1	1	4	1	1	8
Distributive Education	-	1	-	1	1	3
Auto Mechanics	-	-	-	2	1	3
English	-	-	5	1	1	4
Mathematics	-	-	4	1	2	4
Biological Science	-	-	4	-	-	4
No other Areas Involved	11	6	27	23	19	86
TOTAL	13	11	34	28	24	110

QUESTION K: How Financed.

The respondents were asked to check the source of financing. The results are not conclusive because several replies had more than one response marked.

TABLE No. 30

	Groups I	II	III	IV	V	Total
Local-State Only	5	7	18	4	14	48
Local-State-Smith Hughes and George Barden	5	5	8	16	1	35
Local-VEA '63 Only	2	4	8	9	11	34
No Answer	3	-	1	2	1	4
TOTAL	13	11	34	28	24	110

QUESTION L: Facilities Required:

The respondents were asked to check the facilities required for the new courses.

TABLE No. 31

	Groups					Total
	I	II	III	IV	V	
Shop	3	2	6	6	5	22
Classroom	12	10	25	22	19	88
Laboratory	2	2	4	10	3	21
School Farm Laboratory	4	1	6	9	4	24
Ornamental Horticulture Unit	4	8	13	14	14	53
Local Business or Industrial Facility	2	-	4	-	-	6
Library	-	-	-	-	1	1
No Answer	-	-	-	1	-	1
TOTAL	13	11	34	28	24	110

QUESTION M: Other information or Comments Regarding New Courses or Developments.

The respondents were asked to fill in any additional information of value not already included in the questionnaire.

Several schools indicated they are designing courses to replace what was formerly called "General Agriculture," and that they are establishing work experience programs.

CHAPTER III

SUMMARY

On-Going Courses--During the Last Five Years.

Almost half of the schools have changed course titles. Most frequently mentioned titles included the words Science, Ornamental Horticulture, Management and Business.

About half indicated a change in primary purpose or objectives. Nearly three-fourths indicated changes in course content. Twenty-nine per cent of the schools indicated changes in emphasis to business and related occupations and 20% indicated changes to Agriculture Science.

Slightly less than half indicated changes in kinds of students enrolled with nearly one-third now admitting girls and college-bound students, and nearly half now permit non-farm students to enroll.

Approximately one-third have changed class time requirements with the trend from double to single periods, and to non-consecutive periods.

One-third of the schools indicated changes in financial support with 85% of the changes due to addition of VEA '63 funds.

Almost half indicated changes in facilities or equipment. The changes were primarily to add O. H., shop or for other specialized facilities.

New Courses--During Last Five Years.

Of the 118 schools responding, 66 schools offered a total of 110 new courses.

Of the new courses the most frequently mentioned words were Horticulture, Business, Floriculture, Science, Vocational, and Plant Science. Some new terms indicated specialized course work in the mechanics field.

The number of new courses added each year since 1961 has been constantly accelerating, with six added in 1961 and 39 in 1965. Over one-half indicated the primary purpose was to prepare for job entry, and approximately one-third each for exploratory, preparatory, and technical training respectively.

Two-thirds of the courses are for both boys and girls. Approximately 20% limit enrollment to boys. Most of the courses were for both college bound and terminal students. The number of courses offered at each grade level increased with grade level from 38 at the ninth grade to 88 at the 12th grade. Most courses were offered one period per day for two semesters. There were no significant seasonal course offerings.

There was more involvement of agriculture with industrial arts and business programs than with any other single vocational, practical arts, or academic areas within the school.

About half of the courses were financed by local-state funds, approximately one-third by adding Smith Hughes and George Barden funds, and one-third by local VEA '63 funds. Slightly over two-thirds of the new courses required classrooms, shops, school farm laboratories and other laboratories were utilized in one-fifth of the courses. Slightly less than half used O. H. units.

APPENDIX A

NEW TITLES FOR COURSES BEGUN PRIOR TO 1961

Title	Frequency					Total
	I	II	III	IV	V	
Agricultural Business	1	-	-	2	2	5
Agricultural Management and Business	1	-	2	-	-	3
Agricultural Business, Farm Management and Marketing	-	1	-	-	-	1
Farm Management	2	2	1	3	1	9
Ranch Management	-	1	-	-	-	1
Agricultural Product and Management	-	-	1	-	-	1
Economics and Finance	-	-	1	-	-	1
Introduction to Agriculture	-	-	-	2	-	2
General Agriculture	-	1	1	-	-	2
Basic Agriculture	-	-	1	-	-	1
Agriculture	-	-	-	3	4	7
Vocational Agriculture	-	1	-	-	-	1
Exploratory Agriculture	-	-	-	-	1	1
Academic Agriculture	-	-	-	-	1	1
Girls Agriculture	-	-	-	-	1	1
California Agriculture	-	1	-	-	-	1
Basic Agricultural Science	-	-	1	-	1	2
Cotton Product	1	-	1	-	-	2
Introduction to Agricultural Science	1	-	-	-	-	1
Scientific Agriculture	-	-	-	-	1	1
Agricultural Science	1	-	4	1	-	6
Advanced Agriculture	-	-	1	-	-	1
Animal Husbandry	-	-	1	-	1	2
Animal Production	-	-	-	-	1	1

continued

continued

Title	Frequency					Total
	I	II	III	IV	V	
Animal Science	2	2	2	5	-	11
Farm Animal	-	-	1	-	-	1
Livestock Production	-	-	1	-	-	1
Animal and Plant Science	-	1	-	-	-	1
Plant Science	1	2	1	3	-	7
Plant Science and Soil	-	-	1	-	-	1
Plant and Soil Science	-	-	-	2	-	2
Soils and Crop Production	-	-	-	-	1	1
Crops and Soils	-	-	2	-	-	2
Farm Crops	-	-	1	-	-	1
Plant Nutrition and Soil Science	-	1	-	-	-	1
Ornamental Horticulture	-	-	1	3	1	5
Ornamental Horticulture Mechanics	-	-	-	-	1	1
Horticulture	-	-	1	1	2	4
Horticulture Science	-	-	-	-	1	1
Basic Horticulture I	-	-	-	1	-	1
Vocational Horticulture	-	1	-	-	1	2
Nursery Practice Horticulture II	-	-	-	1	-	1
Landscape Construction and Management Horticulture III	-	-	-	1	-	1
Landscape Design Horticulture IV	-	-	-	1	-	1
Floriculture	-	-	1	1	2	4
Nursery and Park Maintenance	-	-	-	1	-	1
Forestry	-	-	-	-	1	1
Pomology and Viticulture	-	-	1	-	-	1
Landscaping and Flower Arrangement	-	-	1	-	-	1
Forestry and Wildlife Conservation	-	-	1	-	-	1
Surveying	-	-	-	-	1	1

continued

continued

Title	Frequency					Total
	I	II	III	IV	V	
Farm Projects	-	-	-	-	1	1
Agricultural Construction	1	-	1	1	-	3
Agricultural Shop	-	1	-	1	-	3
Agricultural Structures and Construction	-	-	1	-	-	1
Agricutural Power and Equipment	-	-	1	-	-	1
Agricultural Power and Mechanics	-	-	1	-	-	1
Basic Agricultural Mechanics	-	-	1	-	-	1
Agricultural Mechanics	-	1	1	2	-	4
Agricultural Mechanics Skills	-	-	1	-	-	1
Farm Mechanics	-	1	-	-	-	1
Basic Farm Mechanics Skills	-	1	-	-	-	1
Agricultural Machinery	-	-	1	-	-	1
Introduction to Agricultural Mechanics	1	-	-	-	-	1
Agricultural Engineering	1	-	2	-	-	3
Farm Engineering	-	1	-	-	-	1
Farm Power	-	1	-	-	-	1
Farm Power and Farm Machinery	-	1	-	-	-	1
Farm Construction	-	1	-	-	-	1
Farm Building and Farm Electric	-	1	-	-	-	1
Agricultural Mathematics	-	-	-	-	1	1
Farm Equipment Mechanics	-	-	-	-	1	1
Welding	-	-	-	-	1	1
Advanced Welding	-	-	-	-	1	1
Agricultural Welding	-	-	-	2	-	2
National Resources	1	-	-	-	-	1

APPENDIX B

TITLES OF COURSES BEGUN AFTER 1961

Title	Frequency					Total
	I	II	III	IV	V	
Agricultural Business	1	1	1	1	2	6
Farm Management	1	2	-	-	-	3
Farm Management and Agricultural Business	1	-	1	-	-	2
Agriculture	-	-	-	1	1	2
Introduction to Agriculture	-	-	-	2	-	2
General Agriculture	-	-	5	-	-	5
General Agriculture for Girls	-	-	1	-	-	1
Basic Agriculture	-	-	1	-	-	1
Agricultural Arts	-	-	1	-	-	1
Agricultural Science	1	-	-	-	1	2
Scientific Agriculture	-	-	-	-	1	1
Vocational Agricultural Science	-	1	-	-	-	1
Academic Agriculture	-	-	-	-	1	1
Animal Husbandry	-	-	1	-	1	2
Animal Science	1	-	1	3	-	5
Butchering and Meats	-	-	1	-	-	1
Plant Science	1	-	1	2	-	4
Plant Science and Soils	-	-	1	-	-	1
Plant and Soil Science	-	-	-	1	-	1
Ornamental Horticulture	-	6	4	5	6	21
Ornamental Horticulture and Gardening	-	-	1	-	-	1
Vocational Ornamental Horticulture	-	-	1	1	-	2
Horticulture	-	-	-	2	-	2
Vocational Horticulture	-	1	1	1	3	6

continued

continued

Title	Frequency					Total
	I	II	III	IV	V	
Ornamental Agriculture	-	-	1	-	-	1
Floriculture	-	-	1	3	1	5
Girls Floriculture	-	-	-	-	1	1
Landscape and Gardening	1	-	-	-	-	1
Landscaping	-	1	-	-	-	1
Landscape Management	-	-	1	-	-	1
Nursery Practice	1	-	-	-	-	1
Nursery and Park Maintenance	-	-	-	1	-	1
Pomology and Viticulture	-	-	1	-	-	1
Forestry	-	-	-	-	1	1
Life Science	1	-	-	-	-	1
Surveying	-	-	1	-	1	2
Natural Resources	1	-	-	-	-	1
Home Improvement Skills	-	1	-	-	-	1
Construction	-	-	1	-	-	1
Agricultural Construction	1	-	1	1	-	3
Agricultural Mechanics	-	-	-	1	-	1
Basic Agricultural Mechanics	-	-	1	-	-	1
Ornamental Horticultural Mechanics	-	-	-	-	1	1
Agricultural Shop	-	-	-	1	-	1
Agricultural Engineering	1	-	-	-	-	1
Agricultural Power Mechanics	-	-	1	-	-	1
Farm Equipment Mechanics	-	-	-	-	1	1
Welding	-	-	-	-	1	1
Advanced Welding	-	-	-	-	1	1
Vocational Welding	-	-	1	-	-	1
Basic Botany	-	-	1	-	-	1
Basic Chemistry	-	-	1	-	-	1

VT 005 283
Miller, Robert
A Suggested Guide for Industrial Arts Education.

Alaska State Dept. of Education, Juneau. Div. of Vocational Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 66 6p.

*ADMINISTRATOR GUIDES; *INDUSTRIAL ARTS; *SECONDARY SCHOOLS; *CURRICULUM; *STATE CURRICULUM GUIDES
ALASKA

This administrative guide was developed to encourage the development of comprehensive industrial arts programs in Alaska high schools. Industrial arts is based on these assumptions: (1) It is general education, (2) It is for the entire student body regardless of occupational goals, (3) It draws upon today's technology and is directed toward technological literacy, (4) It should develop industrially related experiences and basic knowledges and skills required by all members of society, and (5) It is a set of calculated experiences to interest and inform students about technology. It was suggested that each industrial arts program offer at least one unit in each of these areas: (1) drafting, (2) woodworking, (3) metal working, (4) power machines, (5) electricity-electronics, (6) graphic arts, (7) ceramics, (8) leather, (9) plastics, (10) textiles and weaving, and (11) handicrafts. (EM)

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ED033237

(C.1)

A Suggested Guide
for
Industrial Arts Education

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT005283

INDUSTRIAL ARTS EDUCATION

The question often asked is: "What type of educational experiences should our school system develop for those who may not go on to college?" Another fundamental question is: "What type of educational experiences should our school system develop that will interest those students that see no meaning in the present educational program?" The answer to these questions is more often than not, "Introduce Vocational Education, or, more Vocational Education in the school curriculum." However, the very nature of vocational education is that it is directed to specific occupational goals. That is, even though there are literally tens of thousands of programs that can be conducted in vocational education, each program is designed to serve a specific occupation or small occupation cluster. Therefore, a vocational program generally, but not always, costs more than does other programs such as physics or biology. But more important and certainly more fundamental is the fact that in small high schools, high schools with an enrollment of less than 400, you rarely have a large enough student resource to draw enough students into the specific course areas. This is particularly true in the areas of trade and industrial education. Thus too often inadequate courses in the trade and industrial occupations are generated in hopes of gaining financial assistance from State and Federal funds. Curricula or courses that are generated by school districts with this type of philosophy can only be poor at best, and they are not able to justify their existence on the basis of serving the student or stopping the drop-out rate.

A more honest approach is that of developing an excellent industrial arts program within the high school. However, there are no Federal or State funds for developing these programs. Yet, the industrial arts program if conducted properly, will contribute to the high school curriculum and produce a substantial improvement in its students' educational experiences.

What, then, constitutes an excellent industrial arts program? The following program may be used as a suggested guide. However, it is not the final answer to all industrial arts programs. It is proposed with the overall purpose of encouraging the development of comprehensive programs within the Alaskan high schools.

First some basic pre-suppositions.

1. Industrial arts is a general education program. (Similar in nature and purpose to basic English or arithmatic.)
2. Industrial arts is for the entire student body no matter what its members have as occupational goals.
3. Industrial arts draws upon the technology of today for its instructional content, and one of its main goals is directed toward developing technological literacy for all students.
4. Industrial arts is to develop experiences relating to the industrial community, but it also is to develop

those basic knowledges and skills required by all members of society.

5. *Industrial arts is not a wood shop, or a metal shop, or an auto shop or a combination of these*. It is a set of calculated experiences to interest and inform the entire student body about the world of technology.

Therefore, the industrial arts curriculum should be dynamic in nature, varied in its approach and continuously changed and up-dated. *If the school district cannot reasonably guarantee this type of program, then the program probably should not be implemented*. But, industrial arts can be practically implemented and, when you consider that over 90 per cent of the population has less than a college education, it seems indispensable.

The following is an industrial arts curriculum including some topic headings.

I. Drafting:
- Machine drawing
- Lettering
- Design
- Sketching
- Sheet metal drawing
- Blueprinting
- Architectural drawing
- Engineering drawing
- Maps, graphs, charts
- Electrical drawing
- Aviation drawing
- Structural drawing

II. Wood working:
- Finishing
- Furniture making
- Cabinet making
- Carpentry
- Carving
- Wood turning
- Upholstering
- Construction
- Mill work
- Pattern making

III. Metal working:
- Art metal
- Sheet metal
- Bench metal
- Jewelry
- Machine shop
- Etching
- Heat treating
- Foundry
- Forging
- Metals industries
- Wire work
- Mining industries
- Welding and brazing
- Plating
- Metal spinning

IV. Power machines:
- Home mechanics
- Auto mechanics
- Aviation mechanics
- Diesel mechanics
- Marine engine mechanics
- Farm mechanics

V. Electricity/electronics:
- Wiring
- Magnetism
- Lighting
- Appliances
- Measuring devices
- Communications
- Electronics
- Generations
- Heating
- Transmission
- Distribution
- Transportation

VI. Graphic arts:
- Letterpress printing
- Block printing
- Silk screening
- Printing industries
- Bookbinding
- Etching
- Photography
- Offset
- Paper making
- Rubber stamp making
- Engraving
- Ink making

VII. Ceramics:
- Keenes cement
- Finishing
- Casting
- Plaster of paris
- Glazing
- Slab work
- Pinch ware
- Ceramics industry
- Lapidary
- Thown work

VIII. Leather:
- Lacing
- Tooling
- Finishing
- Stamping
- Carving
- Embossing
- Leather making
- Shoe making

IX. Plastics:
  Finishing
  Twisting
  Welding
  Internal carving
  Molding
  Plastic industry
  Casting

X. Textiles and weaving:
  Chair caning
  Cord and rope work
  Raffia
  Basketry
  Sewing
  Textile industry
  Fabrics
  Finishing
  Tailoring
  Knitting

XI. Handicrafts:
  Model building
  Flocking
  Bair making
  Fly tying
  Soap carving
  Shell craft
  Metal enameling
  Candle making
  Boat building
  Wire forming

As one reads down the list of course subjects, it should be reasonably apparent that each course or even topic heading could be developed into a full vocational trade and industrial curriculum. This list illustrates very nicely the difference between industrial arts and trade and industrial education.

It is felt that the ideal industiral arts program should offer at least a unit in each of the eleven areas referred to. The actual industrial arts curriculum development should be tailored toward the needs and capabilities of each individual school system. However, it should be re-emphasised that industrial arts is general education and a varied educational experience is the prime objective of the program and not the development of a marketable skill.

RM:gh

VT 005 517
Warren, Richard; Stevens, Dan
Developing a Program of Occupational Education for All. Final Report.

Niles Community Schools, Mich.
Michigan Vocational Education Research Coordinating Unit, Lansing
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 29Jan68 64p.

*OCCUPATIONAL GUIDANCE; *OCCUPATIONAL INFORMATION; OCCUPATIONAL CLUSTERS; INDUSTRIAL EDUCATION; HOME ECONOMICS EDUCATION; BUSINESS EDUCATION; GRADE 7; GRADE 9; *PREVOCATIONAL EDUCATION; QUESTIONNAIRES; *CLASSROOM GUIDANCE PROGRAMS; INSTRUCTIONAL MATERIALS; PILOT PROGRAMS; *CAREER PLANNING; WORK EXPERIENCE
NILES COMMUNITY SCHOOLS; MICHIGAN

During an occupational workshop conducted under the leadership of Educational Research Council of America in Cleveland in August of 1966, an occupational arts unit for the 7th grade level was developed. It was implemented on a pilot program basis in the ensuing school year. Seventh grade occupational arts units of nine weeks in length were set up in the areas of home economics, business, and industrial arts. At least one unit was required of each student and one or two additional could be elected. Through the units the student had an opportunity to work with the tools and materials in each specific occupational area. Time was spent on developing an idea, designing a product, financing the operation, developing job descriptions, advertising, and selling the product. All ninth grade students were required to take a nine week unit entitled "Occupational Information" in which the purpose was to create an awareness of clusters of occupations. Resource people were used. The students' experiences culminated in the initiation of an occupational plan for the tenth, eleventh, and twelfth grades. The purposes of the units seemed to be accomplished and a full scale program for the year 1967-68 was undertaken. Appendixes contain sample materials from the program. (JK)

VT005517

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Developing a Program of

OCCUPATIONAL EDUCATION FOR ALL

by Richard Warren & Dan Stevens

NILES COMMUNITY SCHOOLS

RESEARCH COORDINATING UNIT
DIVISION OF VOCATIONAL EDUCATION
MICHIGAN DEPARTMENT OF EDUCATION

JANUARY 29, 1968

VT005517

FINAL REPORT

TITLE: Developing a Program of Occupational Educational For All

AUTHOR: Mr. Richard Warren, Superintendent
Mr. Dan Stevens, Director of Vocational Education

INSTITUTION: Niles Community Schools
Niles, Michigan

AGREEMENT:

The Board of Education of the Niles Community Schools agreed to share the pilot program costs on a 50% basis with the Research Coordinating Unit of the Division of Vocational Education to the extent of $22,508.00. The state's share was $11,254.00.

DATE: January 29, 1968

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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PREFACE

The Vocational Act of 1963 initiated a great deal of attention on an area that has been woefully neglected for many years. Since the Act, more and more monies have been poured into the educational stream to improve and expand vocational programs. Some educators believe that by simply expanding, in many cases, obsolete programs without new ideas, new approaches, new methods, will have little impact on the labor force of today and tomorrow. A number of institutions are attempting innovative programs. Presumably, none of these programs will completely answer all of the questions being raised, nor will they solve all of the problems.

The Niles Community Board of Education, along with the administration, feel very strongly about the education of our youth and the role occupational education has in the whole picture. It believes new ways must be explored and evaluated.

This report is not a summary of a plan that will solve all of our problems. In fact, in terms of scope, hardly scratches the surface. It could be a partial beginning of a possible solution for not only the youth of our community, but for the youth of Michigan and the nation. Without a question, it is a starting point for further investigation.

The authors would like to thank the teachers, parents, and administration of the students at Ballard Junior High School for the patience and cooperation. Without their help, this report would never have been necessary. Special appreciation is also expressed to the many fine people in our community who gave of their time and talents in assisting our staff to implement this program.

INTRODUCTION

The world of work is for everyone. Occupational competence of all is of utmost importance in national survival, as well as the economic sufficiency related to individual and the community.

Vocational training restricted to only some of our youth as a part of their education tends to continue the undesirable image we have lived with for too long a time; namely, that only a few are training for work and they are the ones that cannot succeed academically. The others are going to college.

Successful occupational training implies effective use of basic skills begun in the elementary schools and carried on through the junior and senior high programs. It must be related to academic and cultural courses in the secondary schools. The interdependency of all disciplines must be recognized as being fundamental to the total educational development of secondary youth. Therefore, all subject areas must contribute to the goals of training for occupational competence. A program of occupational training for all youth which focuses upon good achievement of basic learning skills and relates student interests and abilities and instruction to realistic goals will require all teachers to think of how the separate disciplines contribute to these occupational goals.

The emphasis in vocational education in the past, and still too true today, is "specific skill training in the 11th and 12th grades." Very little is being done to develop proper attitudes toward the world of work; to provide an appreciation of the tools of work and the dignity of labor; to provide a knowledge of the many families of occupations; to instill the meaning of team work and an understanding of the Free Enterprise System.

It behooves the schools to broaden the scope of it's training and to reorient all teachers to the concept that a prime objective in the

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education of boys and girls is to prepare for realistic occupational goals. It must be recognized that we cannot tell which occupation is best for each of our youth. We can, however, categorize families of occupations which have common requisites. Then, with the help of occupational counselors and using what can be determined about the abilities, interests and aptitudes of boys and girls, we can begin to set up more realistic occupational goals.

We can begin to inform youth and their parents about jobs they seemingly are capable of performing; what it appears they have interest in; what the jobs pay; whether the job is likely to continue in demand; what kind of training will be needed; and how courses offered in school relate to various occupational goals. Whatever goals are tentatively selected, they must remain flexible and be adjusted with changing interests.

As a minimum, "no one should be allowed to leave school, even by graduation, without reasonable preparation for what he will do next."(7)

With these things in mind, the following objectives were established:

A. To develop staff appreciation for realistic goals of all of their students. This will hopefully result in a re-examination of academic course objectives as they relate to students with occupational goals. This seems necessary if students are to see the relationship of what they are required to take in school and what their future goals are. This should affect the drop-out rate and it should make education more meaningful.

B. Schools need sincere and continuing support of the community. They also need to be understood. Community involvement has proven to be a major factor in this understanding and support. This can make the difference between success and failure of an otherwise valuable program.

C. It is necessary to develop aptitudes of the parents in terms of what is realistic for their children. One of the major problems confronting educators today is how to work with parents to help them realize that all students are not capable of academic college work or that they do not have the aptitude for it; that any number of occupations are available to their children if properly motivated, prepared and trained. It is extremely important that development of parental attitudes begin as early as possible so as to prevent false hopes and unrealistic goals in the part of both parent and child.

All students should have an opportunity to develop:

D. An appreciation of doing a job well, regardless of kind or degree, of recognizing that there is dignity in all kinds of work. When we know that only two out of ten students entering the elementary school will receive a college degree, it becomes necessary as early as possible to begin developing good attitudes toward the world of work. It is extremely important that we point out that there is dignity in any work -- be it waitress, plumber, groundskeeper, teacher, doctor or any of the other thousands of occupations listed in the Dictionary of Occupational Titles. According to a recent study in Michigan,(1) the next 15 years will find a rapid growth in the service and clerical occupational areas; whereas, a decline in the manufacturing is indicated.

E. An understanding of how work can become a source of satisfaction as well as a source of income. With more and more leisure time available for the worker, due to the shorter work week, some kind of activity should be discovered to become involved in. This activity would not necessarily be remunerative.

F. His abilities, limitations and interests vocationally and avocationally. In order for a student to begin evaluating his likes, dislikes and capabilities, he must become involved in as many experiences as possible. From these experiences, he begins to sift out the good from the bad as he sees them. Therefore, when it becomes necessary for him to begin deciding on an occupational choice, the many experiences will allow for a more intelligent decision.

G. An appreciation of good interpersonnel relationships vital to the Free Enterprise System. It is important that students recognize that individual competition and teamwork are both necessary. Since the first assembly line, the need for teamwork has grown in importance. We no longer find one person involved in the entire productive process. However, individual thinking and individual competition is necessary for healthy and continued growth in our productive process.

H. An appreciation of tools, materials, knowledge, skills and terminology used in given occupations. Students should have an opportunity to feel and work with the tools, machines and materials in various occupations. This experience will give the student an appreciation of the degree of skill necessary in a particular type of work. This, in turn, helps him determine whether or not this kind of work is for him.

I. To provide a basis for selecting further high school or post high school training. The exploratory work in junior high; the "Occupational Information and Opportunities"; form the basis for the 10th grade Occupational Economics.

Out of these experiences, with good occupational guidance and counseling, the remaining high school courses can be planned with relevance to interests and abilities discovered up to this time.

J. To develop economic understanding. Few students or adults understand the functioning of our economic system. This is due to two shortcomings: (1) Little attempt has been made to accomplish it except through book learning, and (2) Few persons have an opportunity to see or participate in more than one or two aspects of this vast operation.

There appears to be sufficient material written regarding a need for this type of program, but very little in pilot projects to demonstrate what and how it can be done. Dr. James Altman, (2) Dr. George Leonard, (3) Dr. Fred Cook, (4) all have expressed the need for a change in vocational education. The M.I.T. study(5) and "Vocational Education in a New Concept"(6) have reinforced similar expressed needs (A complete list of text references can be found in Appendix B)

METHOD

In August of 1966, an occupational workshop was held in Cleveland. This was conducted under the leadership of the Educational Research Council of America. The workshop was spread over a two week period involving seven to eight hours per day. For a complete list of participants see Appendix A.

The main objective of the Occupational Education area was to develop an Occupational Arts unit at the 7th grade level.

Considerable time was spent on the approach to be used and objectives to be reached. The efforts of the group during the two weeks brought about the initial unit outline. (Appendix E) It was decided that Niles would implement this program in 1966-67 at one junior high school with all 7th grade students on a pilot program. The group pf participants in the workshop from Niles acted as a team during the program, meeting periodically to evaluate, further develop the outline, revise, etc.

After completing the program, a re-write of the original outline was completed. (Appendix F) This was done to make use of experiences and knowledge gained during the pilot program. Niles continued to work with consultants from ERCA to evaluate and develop supplementary materials, films, pamphlets, texts, etc.

An occupational arts business teacher in the 7th grade program was a vital part of the team in a similar capacity at the two other teachers in home economics and industrial arts.

Mr. Elmer Peterman, principal, played a very important role in scheduling the 7th grade students. The students were taken out of music, study hall, and physical education in order to participate in the program. (Flexible scheduling is being contemplated for school year 1967-68.) In expanding the program to the 8th and 9th grades, this becomes a necessity.

All junior high counselors were involved in team meetings, basically, from the standpoint of becoming informed as to progress and problems. The counselors at Ballard Junior High played a more active role in working with the occupational teachers and individual student. Much more time has been given to individual students in terms of counselor assistance in the pilot program.

An advisory committee was organized to develop the Occupational Information unit at the 9th grade level. This committee consisted of all junior high counselors (4), director of guidance, occupational counselor (chairman), vocational director, two principals, one assistant principal and one English teacher. Inasmuch as the counselors provided the leadership in this program, it was felt that all junior high counselors should be included in the planning. The superintendent held periodic meetings to discuss progress and problems pertaining to the program.

Pertinent information on all 6th grade students was passed on with the students as they moved into the 7th grade phase of the Occupational Education For All program. Teachers and counselors used this information to provide more meaningful instruction and learning experiences for the individual students. Contact with the parent by the counselor continued when necessary during this transitional period.

Seventh grade occupational arts units of approximately nine weeks in length were set up in the areas of home economics, business, and industrial arts. Food processing, clothing, office training, retailing, metals, drafting, woods, were the possible units a student could participate in. These units were not designed to prepare students for entry into specific occupations, but through actual work experience, develop insight as to how people get their work done. The student had the opportunity of working in many different phases of a specific occupational area. For example, he may have taken part in the food processing area in preparing the dough for a product such as pizza. He may have an opportunity to prepare the ingredients to go into the pizza. He may have cut out the cardboard for the bases. He may have had an opportunity to sell the finished product, etc. Thus, having been involved in many different jobs, he could see the need for teamwork; he could see that each job, regardless of difficulty or importance, was vital to a successful enterprise. He might have found certain kinds of jobs were not to his liking as a vocation, but could be the type of activity that he might wish to undertake at home for his own satisfaction.

At least one unit was required of each student in the 7th grade. One or two additional units could have been chosen during the year if the student so desired.

The units afforded the student an opportunity to work with the tools and materials in each specific occupational area. Ample time was spent on developing an idea, designing the product, financing the operation, building the prototype, setting up assembly line operation, developing job descriptions, advertising and selling the product.

Tools, machines, materials, and terminology were utilized in carrying out the above. The actual experience received gave the student an appreciation of the degree of skill necessary in a particular type of work. Field trips, outside speakers, films, etc. were made use of, particularly at the beginning of the unit. The student and teacher evaluation instrument (Appendix G) was completed by each student at the end of each unit. The teacher then added additional comments from her observations of that student.

In addition to the occupational arts units, all 9th grade students were required to take part in a nine weeks unit entitled Occupational Information. Students were not involved with tools and materials. More was done from the standpoint of creating an awareness of clusters of occupations. Assistance by the counselors in coordinating the students' interests and abilities with realistic occupations and helping him begin self-evaluation was a major aspect of this unit. Occupational trends and needs were presented to better inform the student as to what possibilities lie ahead.

All junior high counselors headed by the occupational counselor made up the staff for this unit. Resource people from business and industry were called in to supplement the educational staff. So as not to make this a lecture type of presentation, role playing, actual interviews, films, field trips and group discussions were made use of. To bring together all of the experiences the student had in the junior high program and including the occupational courses and information units, an occupational plan (Appendix D) was initiated. During the final week of the information unit, the students with the assistance of the counselors developed a plan (tentative schedule of courses) for the 10th, 11th and 12th grades. This plan remains flexible and may be changed as needed during the three year period. The plan was discussed with the parents and must receive the parent's approval initially and before changes are made at a later date. (A complete copy of Occupational Information Unit including schedule of activities, instruments used, and evaluation summary, may be found at the end of this report in the Appendix Supplement.

Mention has already been made of community support and involvement both in the objectives and implementation of the various occupational units. A list of advisory committee participants can be found in Appendix C. In addition, a number of business and industrial representatives donated their time and talents in assisting the staff in the Occupational Information Unit. These people are identified in the Occupational Information Unit found in the Appendix Supplement.

CONCLUSIONS

From the standpoint of meeting objectives, we have found these units and procedures to be most effective for the following reasons:

1. Student interest in the area of occupational education has increased considerably.
2. A number of students elected a second unit if their schedule permitted.
3. There exists a great deal more interest in terms of students discussing occupational goals with counselors.
4. Student participation and enthusiasm were much in evidence during the units.
5. Because of the mass production approach, students are aware and sensitive to the teamwork needed in manufacturing a product.
6. The initiative and ingenuity shown in solving problems that come up have amazed the instructors.
7. The teachers are much enthused with the results.
8. Students have found that not all jobs are pleasing. It becomes quickly evident that they like, and will work harder, at some tasks than others assigned to them. Therefore, doing a job that one likes and doing it well, perpetuates the efficiency of the entire operation.
9. Students having had a part in the entire productive process, came to look at the product as something that belongs to them to the extent that they wonder why they have to pay for the finished product when sold.
10. Parents have shown a great deal of interest in the pilot program and have expressed approval of this type of training and the need for it. They want to make sure their child takes part in it.
11. Participation in the advisory committee has been beneficial to both instructors and business and industrial representatives. These people are amazed at the potential and have become enthusiastic about the possibilities and what is being done to help their problem. The instructors are becoming more enthusiastic due in part to the reaction of the other members.

SUMMARY

The success of the pilot program and the ultimate contribution this approach could make on the education of our youth, prompted the administration to develop a proposal to implement a full scale program for school year 1967-1968. This proposal was submitted under Title III of the Elementary and Secondary Education Act. It was approved and Niles is presently involved in the first year of an operational grant.

APPENDIX A

OCCUPATIONAL EDUCATION WORKSHOP

Consultant In Charge:

Dr. Ross Hamilton, Research Associate, Department of Administration Services, Educational Research Council of Greater Cleveland, Cleveland, Ohio

Tutorial Advisor:

LeRoy Hoskins, Guidance Counselor, Rocky River High School, Cleveland, Ohio

Participants:

Dan Stevens, Director of Vocational Education,
Niles Community Schools, Niles, Michigan
William Davis, Occupational Counselor,
Niles Community Schools, Niles, Michigan
Mrs. Joan Nurmi, Teacher of Home Economics,
Ballard Junior High School, Niles, Michigan
Donald Horner, Teacher of Industrial Arts,
Ballard Junior High School, Niles, Michigan
Laurence Loffman, Counselor,
Berea Junior High School, Berea, Ohio
Ted Fries, Counselor,
Berea Public Schools, Berea, Ohio
Ralph Fullmer, Counselor,
Berea Public Schools, Berea, Ohio
Mrs. Mary Jane White, Counselor,
Berea Public Schools, Berea, Ohio
James Wiebrecht, Counselor,
Berea Public Schools, Berea, Ohio

APPENDIX B

TEXT REFERENCES

(1) Michigan Manpower Study - Battelle Memorial Institute, 1966

(2) Toward a Concept of Integrated Vocational Education (Speech delivered at 1965 A.V.A. Convention in Miami by Dr. James Altman)

(3) Summary Report of the Summer Study in Occupational, Vocational and Technical Education, Massachusetts Institute of Technology, 1965

(4) Opportunities and Requirements for Initial Employment of School Leavers with Emphasis on Office and Retail Jobs - Phase Two - Dr. Fred Cook, Wayne State University, Detroit, Michigan

(5) Summary Report of the Summer Study in Occupational, Vocational and Technical Education, Massachusetts Institute of Technology, 1965, page 3

(6) Re-structuring of Secondary Education - Educational Research Council of America

(7) Education and Training for the World of Work, Page 7, Harold T. Smith, W.E. Upjohn Institute for Employment Research, 1963

APPENDIX C

CRAFT ADVISORY COMMITTEES

HOME ECONOMICS (Junior and Senior High School)

Mrs. Elmer Peterman - 512 Springfield - 684-2111
Mrs. Richard Cooper - WNIL Radio Station - 416 Sycamore - 683-2096
Mr. Frank Frucci - 1033 Lake Street - 683-7474
Mrs. Kenneth Kunst - 1347 Louis - 683-0099
Mrs. Daniel Clark - Four Flags Hotel - 404 East Main - 683-7100
Mrs. Judith Hayden - Ring Lardner Junior High School - 683-6610
Mrs. Joan Nurmi - Ballard Junior High School - 683-5900
Mrs. Janet Lightfoot - Niles Senior High School - 683-2894
Mrs. Lowena Murphy - Niles Senior High School - 683-2894
Mrs. Pat Garcia - Brandywine Senior High School - 684-2210
Mrs. Jane Martin - Brandywine Senior High School - 684-2210

T & I AUTO MECHANICS AND POWER MECHANICS

Mr. Don Hayden - Joe Hayden, Inc. - 1102 S. 11th - 683-3920
Mr. Robert Radka - Chrysler & Imperial Sales - Dennis Briggs - 2624 N. 5th - 683-8288
Mr. William Gaideski - Niles Automotive - 312 N. Front - 683-6750
Mr. Charles DeVall - Car Parts - 920 Lambert - 683-2900
Mr. Nicholas Fullbright - Four Flags Garage - 223 N. Front - 683-9600
Mr. Ronald Butler - Niles Senior High School - 683-2894
Mr. Irving Eldred - Niles Senior High School - 683-2894
Mr. John Hinke - Brandywine Senior High School - 684-2210

ELECTRONICS

Mr. Anthony Planchard - A-P Electrical Service - 524 Sycamore - 683-8555
Mr. Kenneth Giedeman - Niles Radio & Supply - 933 N. 5th - 684-0550
Mr. Vance Nurmi - Niles Senior High School - 683-2894
Mr. Leonard Standen - Brandywine Senior High School - 684-2210

AGRICULTURE

Mr. Dean L. Cousins - 1985 Weiser Road - 684-0286
Mr. O. H. Olnes - Michiana Chemical - 684-2006
Mr. Phillip McKenzie - 2751 White Street - 683-0594
Mr. Lawrence W. Butler - 1055 Alouez - 683-0067
Mr. Max Benington - 1465 West River Road - 683-8809
Mr. Roy G. Peters - 1521 East Main - 683-8000
Mr. Harold Hunziker - 2344 Yankee - 683-9555
Mr. Stanley Radewald - 4550 M-140 - 683-4194
Mr. Paul A. Kemble - 2035 Winn Road - 683-8974
Mr. Lowell McMillen - Niles Senior High School - 683-2894

DRAFTING

Mr. Larry Locke - Tyler Corporation - 683-2012
Mr. Jack Appel - Chief Draftsman--Kawneer Company - 1105 N. Front - 683-020
Mr. Roy Stewart - Chief Mechanical Engr.-National Standard - 601 N. 8th - 683-8100
Mr. Willis Dunham - Niles Senior High School - 683-2894
Mr. John Kenny - Brandywine Senior High School - 684-2210
Mr. Bill Zellers - Niles Engineering - 684-0910
Mr. Fred Gondeck - Tyler Corporation - 683-2012

WOODWORKING

Mr. Richard Miller - Home Lumber & Supply - 611 Wayne - 683-8520
Mr. Ralph Wegner - Williams Supply - 915 S. 15th - 683-2700
Mr. Gysbert Kalleweard - Babbitt Lumber - 402 N. Front - 683-3610
Mr. Bruce Cook - Cook & Randall Realtors - 1706 Oak - 683-3970
Mr. Harry Jankoviak - Niles Senior High School - 683-2894
Mr. Willis Dunham - Niles Senior High School - 683-2894
Mr. Bob Grimm - Brandywine Senior High School - 684-2210

GRAPHIC ARTS

Mr. Winston Sands - Simplicity Pattern Co. - 901 Wayne - 683-4100
Mr. Jack Cox - Simplicity Pattern Co. - 901 Wayne - 683-4100
Mr. David Kinson - Vice Pres., Moser Paper Co. - 321 S. Main, South Bend, Indiana - 289-4009
Mr. Newton Bacon - Salesman, Moser Paper Co. - 321 S. Main, South Bend, Indiana - 289-4009
Mr. Charles Bolton - AD Print Co. - 1360 Maple - 684-2080
Mr. Richard Regester - Niles Senior High School - 683-2894

POWER MECHANICS (See Auto Mechanics)

MACHINE SHOP

Mr. Richard Peacock - National Standard - 683-8100
Mr. Norman Mead - R & M Mfg. Co. - 2424 N. 5th - 683-9550
Mr. William Weirick - Niles Senior High School - 683-2894
Mr. Leonard Standen - Brandywine Senior High School - 684-2210
Mr. Robert Grimm - Brandywine Senior High School - 684-2210

METALS

Mr. J. C. Wood - Niles Steel Tank - 683-1910
Mr. R. H. Freevol - Garden City Fan & Blower Co., Vice-Pres.-Eng. - 683-1150
Mr. Paul DeWitt - Niles Senior High School - 638-2894
Mr. Robert Grimms - Brandywine Senior High School - 684-2210
Mr. John Randolph - Kool-O-Matic - 683-2600
Mr. Wallace Suave - Tyler Corporation - 683-2000
Mr. Joseph Kimmerly - Dayco Sheet Metal - 683-1935

BUSINESS

Mr. Dorwin Starke - Tyler Corporation - 683-2000
Mr. Ralph Roose - First National Bank - 683-4000
Mr. Duane Libey - Montgomery Ward Co. - 683-6100
Mrs. Paul Jedele - Mayfair Shoppe - 683-9050
Mrs. Glen Edwards - Montgomery Ward Co. - 683-6100
Mr. Justine McCarty - Chamber of Commerce - 683-3720
Mrs. Mary Jane Kovac - Niles Senior High School - 683-2894
Miss Linda Milbourn - Niles Senior High School - 682-2894
Mr. Donald James - Brandywine Senior High School - 684-2210

GENERAL ADVISORY COMMITTEE FOR BUSINESS AND INDUSTRY

Name	Type of Business	Job
Robert Becksfort	Machine Shop	Acct-Exec.V.P.
Leonard Conner	Y.M.C.A.	Director
Herbert J. Cox	Michigan Bell Telephone Co.	Sales Manager
C. K. Field	Industry	Ind. Relations
John Fink	Bank	Personnel
Leland P. Funk	Insurance	Sales - Office
Don E. Kemeny	J.A.	Director
Ewald Lahti	Michigan Employment Security	Manager
Justin McCarty	Chamber of Commerce	Secretary
John McGill	Industry	Labor President
Alf H. Oines	Industry	Pres. - Mgr.
Edward Ossman	Education	Cooperating Supt.
John Parnell	Board of Public Works	Manager
Winston Sands	Industry	Ind. Relations
John Scamehorn	Newspaper	Editor - Mgr.
John M. Seitz	Industry	Personnel Mgr.
Mrs. Roy Stewart	P.T.A.	Council President
Richard VanTuyl	Police	Captain
D. E. Wiscaver	Retail	Manager
William G. Yackey	Industry	Mgr. Labor Relations

APPENDIX D

NAME______________________________

Occupational Goal

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	Advisor	Counselor
8		
9		
10		
11		
12		

Present Advisor

Name______________________________

	SUBJECTS PLANNED	CR.	DATE SEEN	COMMENTS: CHANGES & ACADEMICS
GRADE 9	English			
	Gym/Music			
GRADE 10	English II			
	Gym/Music			
GRADE 11	English III			
	U.S. History			
	Gym/Music			
GRADE 12	Social Studies			
	Gym/Music			

APPENDIX E

OCCUPATIONAL ARTS

OBJECTIVES

A STUDENT SHOULD HAVE THE OPPORTUNITY TO DEVELOP:

A. An appreciation of doing a job well, regardless of kind of degree, of recognizing that there is a dignity in all kinds of work.

B. An understanding of how work can become a source of satisfaction as well as a source of income.

C. His abilities, limitations, and interests, vocationally and avocationally.

D. An appreciation of good interpersonnel relationships vital to the free enterprise.

  (1) To recognize that individual competition and teamwork are both necessary.

E. Insights into his individual worth and the worth of others.

F. An appreciation of tools, materials, knowledge, skills and terminology used in given occupational areas.

G. An understanding of the productive processes of planning and designing and financing, phototype development, mass production and quality control.

H. An appreciation of aesthetic and functional values.

OCCUPATIONAL ARTS UNIT

I. FIRST SEVERAL DAYS

  A. Administrative Debris

    1. Grade book
    2. Fee receipt (fill out)
    3. Locker assignment
    4. Clean-up assignment
    5. Work stations (seating chart)
    6. Checking in supplies and materials

II. GETTING TO KNOW YOUR STUDENTS

  A. Assemble Pertinent Information (team teaching)

    1. Make use of CA 39 Form (Michigan State form)
    2. Student Information form
    3. Staff (counsellors, nurse, elementary teachers and principals)

B. Classroom Activity

1. Class discussion

   a. Individual
   b. Buzz groups
   c. Entire class

C. Utilizing Staff to Work with Individual (Team)

1. Staff - Occupational Staff

   a. Home economics
   b. Business
   c. Industrial arts teachers
   d. Vocational director
   e. Occupational counsellor
   f. Other resource people needed to meet other individual problems

III. WORLD OF WORK (Classroom Activity)(Team to develop Questions, etc.)

A. Make Use of Existing Materials (Team)

B. Classroom Discussion

1. Questions - to stimulate thinking and how does this effect their individual situation and how does this effect the changing world of work?

2. Discussions of changing procedures and operations

   a. Watches
   b. Shaving procedures
   c. Food processing
   d. Broom and vacuum cleaner
   e. Etc. or others

C. The Process of Modern Technology (Discussion)

1. Planning and Design
2. Prototype
3. Assembly Line
4. Quality Control

D. Bring in Prototype Project Suitable for Assembly Line Production

(Teacher and Student initiated)

1. Good examples
2. Poor examples (a very skilled piece of equipment or furniture)

E. Visit Assembly Line

1. Discussion with students before "of what to look for"

        - a. Division of labor
        - b. What would happen if a person were missing (ill)?
        - c. Other questions - team cooperation

    2. Discussion of Field Trip after coming back

IV. SELECT ASSEMBLY LINE PRODUCT BY STUDENT DISCUSSION

- A. Discuss Use and Value of Product

- B. Break down the Product into Jobs from Planning to Selling

    1. Increase the number of jobs

        - a. Result - simple motor movement

    2. Decrease the number of jobs

        - a. Result - higher motor movement

    3. Great quality of work on the part of the worker results in increased production.

V. ACTUAL PLAN FOR ACTION

- A. Planning and Design

    1. Committee of students drawn up for sake of records
    2. Sketch by students sent to high school drafting department to be drawn up.
    3. Plan test pattern
    4. Price-out materials and order materials and when date of delivery
    5. Bring in resource person to evaluate student planning

- B. Prototype

    1. Who will make one

        - a. Student and teacher work together with craft approach
        - b. Teacher to see problems and jobs
        - c. Students to see problems and jobs

- C. Assembly Line (Possibly resource person)

    1. Break down each job of the product mentioned in IV - A into steps

        - a. Motor movements
        - b. Mental activities

    2. Secure work order for so many units
    3. Hire workers (students) and assign to jobs according to worker's qualifications

        - a. Student committee on personnel will talk with students to decide this
        - b. Teacher assign student and after several days determine acclimation of worker, make changes on line
        - c. Volunteers

4. Run line full production

D. Alternatives to Disrupt Full Production (Team)

   1. Strikes (principal notified)

      a. Involvement of social studies teacher
      b. Involvement of English teacher
      c. Involvement of school paper
      d. others

   2. Break-down of assembly line

      a. Failure of equipment
      b. Material shortage
      c. Labor shortage
      d. Labor inefficiency

   3. Others

E. Public Relations (Team)

   1. Invite visitations - Open House

      a. Parents
      b. Teachers
      c. Business
      d. Industry
      e. Newspaper
      f. Counsellors
      g. Administration

F. Quality Control

   1. Students discover need for this

      a. Written down

   2. Team tells what they feel was learned by the students

      a. Written down

   3. Student tells what he learned as an individual

      a. Written down

   4. Compare what the individual student learned against what the group learned for final evaluation

   5. Above Steps 1,2,3,4 take place several times during the unit.

   6. Development of objective system to measure appreciations in terms of behavior.

      a. Teachers
      b. Specialist in evaluating
      c. Etc.

APPENDIX F

OCCUPATIONAL ARTS
(Revised)

I. ORIENTATION (1 or 2 days)

- A. Roll call (grade book)
- B. Schedule problems
- C. Locker assignments
- D. Other problems needing immediate attention

II. GETTING TO KNOW YOUR STUDENTS

A. Assemble all pertinent information

1. Information from elementary counselors (verbal & written)
2. Student information forms (See sample)
3. Student forms should be given to counselors for additional comments.
4. Make use of K-12 occupational folder (See sample)
5. Make use of previous student evaluation forms in occupational folder

B. Classroom Activity (1-2 weeks)

1. Post names of students along with pictures (Students may become better acquainted. Polaroid camera would be helpful)
2. Student interviews and reports - Each student should know and be able to discuss his father's or main wage earner's occupation. Pictures and drawings would be helpful.
3. General class discussion of tools and materials they are already familiar with.
4. General discussion of their knowledge of assembly line.
5. Questions presented to stimulate thinking and how does this affect their individual situation and how does this affect the changing world of work.
6. Discuss the changing procedures and operations of specific products over the last few years. Examples: watches, shaving procedures, food processing, broom and vacuum cleaner, etc.
7. Discuss product that might be made to develop interest.
8. Make use of available speakers from the community in specific areas (work with speakers before presentation as to objectives of his being there.)
9. Make use of films and other audio visual materials that would be applicable to items 3-7. (A list of films and materials should be continually developed.)
10. Make use of field trips where applicable

    a. Field trips involving assembly lines in operation.

b. Discuss with students before field trip as to what to look for.

Examples: Division of labor
What happens when workers are missing (illness)
Need for team work and cooperation

c. Discuss field trip upon returning (Could divide class into smaller groups for discussion. Make use of 2 or 3 member team for this activity.

d. Keep groups small on these trips

e. Develop field trip with employer before going as to objectives of trip.

III. UTILIZATION OF STAFF TO WORK WITH INDIVIDUAL STUDENTS

A. Occupational staff

1. Home economics teacher
2. Business teacher
3. Industrial arts teacher
4. Vocational director
5. Occupational counselor
6. Any other resource people who could be of assistance in working with individual problems.

B. Flexible scheduling is a vital factor in promoting the utilization of staff.

IV. WORLD OF WORK (Select assembly line product through student discussion)

A. Bring in prototype project suitable for assembly line production.

1. Good examples (a list of these should be developed)
2. Poor examples (a very skilled piece of equipment or furniture)

B. Discuss use and value of product chosen

1. Will it sell?
2. Is it a product needed by the consumer?
3. How much will it cost to make (include use of equipment needed, rental of facility, cost of materials, labor costs, and other overhead expenses.)
4. How will this be financed. (Stocks?)

C. Bread down the product into jobs from planning to selling.

1. Organization should make maximum use student personnel.
2. Experiment with the number of jobs needed to produce product.
    a. Decrease - results in higher motor movement.
    b. Quality of work results in increased or decreased production.

V. ACTUAL PLAN OF ACTION

A. Planning and design

1. Committee of students drawn up for sake of records
2. Sketch by students sent to high school drafting department to be drawn up
3. Develop job descriptions for each job
4. Develop list of materials, determine date of delivery and order.
5. Bring in resource person to evaluate student planning.

B. Prototype

1. Develop first model (students and teacher)
2. As prototype is being developed - students have a chance to see problems and flaws.
3. Further redesigning and planning may have to be done at this time.

C. Assembly line (Possible resource person from industry could be of assistance here.)

1. Set up each job station of this product mentioned in A-3 Section V.

    a. Evaluate motor movements
    b. Evaluate mental activities

2. Secure work orders for number of units to be manufactured.
3. Assigning workers to jobs

    a. Student committee on personnel could talk with students to decide according to qualifications,etc.
    b. Students could volunteer according to self known abilities, interests, etc.
    c. Teacher assigns student (May be necessary to shift jobs as product progresses because of efficiency of production)

4. Set up and run full line production
5. Discuss problems with students as problems develop

    a. Breakdown of assembly line

        1. Failure of equipment
        2. Material shortage
        3. Labor shortage
        4. Labor inefficiency

    b. Strike

        1. Involvement of social studies teacher
        2. Involvement of English teacher
        3. Involvement of school paper

D. Public Relations (team)

1. Invite visitation - open house

   a. Parents
   b. Teachers
   c. Business representatives
   d. Industrial representatives
   e. News media
   f. Counselors
   g. Administration
   h. Others

E. Quality Control

1. Students discover the need for this

   a. Observation
   b. By disruption of procedure
   c. Product not made to specification

F. Advertising (Could be coordinated with business occupational unit)

1. Investigate feasible means: (The product made would influence this)

   a. Posters
   b. Displays
   c. Pamphlets

2. Work with sales for best use of Ad. material (Where to put material)
3. Prepare and distribute Ad. material
4. Evaluate effectiveness

G. Sales
1. Investigate Product

   a. Uses
   b. Materials made of
   c. Fair selling price
2. Plan sales slips
3. Plan selling procedure

   a. Direct?
   b. Take orders in advance?
   c. To whom will they sell?

4. Do actual selling and recording of sales

I. EVALUATION

1. Continued evaluation as team meets periodically to discuss future plans, whether or not goals are being reached, etc.
2. Questionnaire (See sample)
3. Observations by teachers, counselors, etc.
4. Student evaluation - Questionnaire (See sample)
5. Individual interviews by teachers and counselors (Are the objectives set up being reached)
6. An objective system to measure appreciation will have to be be developed in terms of behavior. (Team of teachers, specialists, administrators, etc.)

APPENDIX G

OCCUPATIONAL ARTS UNIT

SCHOOL________________________________ DATE______________________

NAME______________________________ GRADE__________ HOUR __________

UNIT____________________________ INSTRUCTOR ______________________

1. What product did you make?____

2. Did you like the occupational unit? Yes ____ No ____

3. Rate your interest in this unit. High ____ Average ____ Low ____

4. What job or jobs did you work on? ____________________________________

____

____

5. Did you work on the job you wanted to work on? Yes ____ No ____

If no, why not?____

____

6. Did you have fun working on the job you had? Yes ____ No ____

7. Did you feel that all jobs were of equal importance? Yes ____ No ____

If no, why not? ____

____

8. Do you think you learned cooperation in working with others? Yes ____ No____

9. Did you feel you were a member of a team in producing the product? Yes__No___

10. Do you feel you might like to do this work for a living? Yes _____ No______

11. To what extent did you gain a knowledge of tools, materials, skills and terminology in this occupational unit? Much_____ Some _____ Little ________

12. Do you think you now have a better understanding of how a product is designed, financed, developed and mass produced? Yes ____ No ____

13. Do you feel that all people are equally important in helping to get a job done? Yes ____ No ____

14. In your opinion, what is the most important thing you learned from this unit? ______________________________

____

____

____

15. Do you have any suggestions for improving this unit? Yes____ No ____

If yes, what? ______________________________

____

____

____

16. Would you be interested in taking a unit in one of the other sections?

Yes ____ No ____ If yes, which one? ______________________________

TEACHER COMMENTS:

APPENDIX SUPPLEMENT

OCCUPATIONAL INFORMATION

Ninth Grade - Ballard
Junior High School
Pilot Program
OCCUPATIONAL EDUCATION FOR ALL

PILOT PROGRAM 1967

9TH GRADE OCCUPATIONAL INFORMATION

UNIT

BALLARD JUNIOR HIGH SCHOOL

ADVISORY COMMITTEE

MRS. MONA BACHELIER - Guidance Director
MR. ALAN CAMREN - Counselor
MRS. JANET DAHLMAN - Counselor
MR. WILLIAM B. DAVIS - Vocational Counselor
MR. LOUIS GRIFFIN - Assistant Principal
MRS. EUNICE JOHNSTON - Counselor
MR. ELMER PETERMAN - Principal
MR. DAN STEVENS - Director of Vocational Education
MR. THOMAS TESKE - Counselor
MISS MARILYN WHITLOCK - English Teacher

9TH GRADE OCCUPATIONAL INFORMATION UNIT

OBJECTIVES

A. To create an awareness of occupations

B. To assist student in coordinating interests and ability with realistic occupation and also to begin self-evaluation.

C. To bring to the attention of the student occupational trends and future needs.

D. To assist the student in developing some type of occupational plan and permanent record.

E. To develop an attitude in the student of the importance of occupational preparation.

INTRODUCTION TO UNIT
(See Appendix A)

February 8 - Periods 2,3,7

1. Transparency on screen
2. Narrator - J.D.
3. Scene I
4. Narration
5. Scene II
6. Narration
7. Hand out questionnaire - A.C. (See Appendix B)

February 9 - Periods 2,3,7

1. Introduction to Scene III
2. Scene III
3. Narration
4. Final Narration
5. Hand out sheet 1 of occupational information (Appendix C)
6. Ask for completed questionnaires

OBJECTIVE I

Purpose - To create an awareness of occupations

A. What occupational fields should be covered

B. What is available

C. Entry kinds of occupations (High School grade)

D. Unions - apprenticeship training

Methods:

1. Speakers
2. Group discussion
3. Panels
4. Films
5. Field trips

February 13 - Periods 2,3,7 - All students

Electronics - films supplied by Bell Telephone Co. entitled "The Far Sound" and "Careers." The best one is to be selected after previewing. At the beginning of this session, J.D. will introduce general format for two weeks, distribute sheets relative to career investigation and suggest ways of dealing with information. (See Appendix D) After film is shown, discussion of film will follow.

February 14 - J.D. 10:13 All students - Business, Finance - Dale Bussler Mr. Bussler will discuss broad area of business, finance, banking, clerical occupations. Discussion period will follow.

February 15 - T.T. - 2:15 Boys only - Speaker Bruce Cook will present the types of jobs in construction and building trades.

February 16 - T.T. - 10:13 - All students. Speaker Les Fisher will present the types of jobs found in transportation. Trucking to airline.

Panel: Dean Renbarger - Clemans Truck Line
Fred West - West Motor Sales
Jack Schick - MTA Travel Agency

February 17 - T.T. - Periods 2,3,7 - Boys only - Speaker Bill Weirick will present the types of jobs found in the machine trades plus apprenticeships and unions.

February 20 - J.D. - 9:20 All students - Advertising - Mr. Harold Prochnow of Niles Daily Star. Mr. Prochnow will discuss displays, photography, advertising management, technical writing, printing and commercial artistry.

February 21 - T.T. - 2:15 - All students. Speakers Bob Unbenhaur and Walter Versaw will present the types of jobs found in Law and Social Service.

February 22 - T.T. - Periods 2,3,7. Lowell McMillen will present a film, "Dynamic Careers Through Agriculture," and the types of jobs found in agriculture.

February 23 - J.D. - 2:15 - All students. Services. Each student selects two groups he wishes to attend, then participates in two 20 minute presentations. Mr. Paul Yedele will discuss retailing. Mr. Frank Frucci will discuss food services and Mrs. Rana Steiner will discuss cosmetology. Mr. Yedele has been instructed to discuss all facets of retailing, both clothing and general sales. Mrs. Steiner will broaden her presentation to include both beauticians, barbers and hair stylists.

PHASE II

OBJECTIVE - To assist student in coordination interests and ability with realistic occupation and also to begin self-evaluation.

A. Examples of tests

B. Counselor and student conference

C. Employer type tests

D. Check list questionnaire

E. Look at past academic record

Method:

1. Role playing
2. Speaker (to discuss employer type of test)

February 27 - M.W.,E.L.J. (See Appendix E) Periods 2,3,7 - Academic Record Testing.

February 28 - Norma Taylor - MESC - 9:20 - Gatby - Application Forms & Interpretation - All students.

Jerry Shook - Kuder interest test in High School.

March 1 - Gil McNeil - 9:20 - All students - Employee Testing in industry

PHASE III

Objective - To bring to the attention of the student occupational trends and future needs.

A. Emphasizing the world of any occupation

B. Number of female workers - increasing

C. Make use of the Battelle Study MESC

Methods:

1. Overhead projector and transparencies
2. Speaker
3. Films (automation
   (mobility of population

March 2 - L.G. - Periods 2,3,7 - All students. Louis Griffin will present the effects of Automation on the future. The film "Automation the Next Revolution" will be shown.

March 3 - A.C. 10:13 - All students - Dale Lindley MESC will speak on trends of occupations. Samuel Stearn - MESC - will present the Battelle Study.

March 7 - A.C. - All students. Periods 2,3,7. Alan Camren will conclude presentation on trends and report on questionnaire.

PHASE IV

Objective - To assist the student in developing some type of occupational plan and permanent record.

A. What about:

Grades
Personality
Temperament
Attitude
Punctuality

Grooming
Language=written and spoken
Courtesy
Responsibility

B. Explain value of permanent record

C. Fill out Occupational Plan

Methods:

1. Speaker (role playing)
2. Personnel Director

March 6 - W.B.D. - All students. 2:15 Richard Weist will present "How the Employer considers the listed characteristics when seeking potential employees." (See previous page for characteristics)

March 8 - W.B.D. - All students. Periods 2,3,7. Noble Lewallen will explain how the permanent record is used by the high school.
Harry Todd will present the procedure and value of the occupational plan as used by the counselor.

March 9 - J.D. - 2:15 - All students. Medicine and Health. Mrs. James Davis of Pawating Hospital will present a 25 minute movie discussing specific medical professions. In the remaining time, she will highlight additional occupations and answer student questions.

PANEL: Mrs. Paul South - Head Nurse to discuss nursing
Mrs. Frank Quiriconi - Business Manager to discuss administration.

PHASE V

Objective - To develop an attitude in the student of the importance of occupational preparation.

A. Coop program - Explain program - Social Security Cards, work permits, child labor laws, etc.

B. Field trip to high school (view occupational program)

C. Explain the meaning of more preparation, the more opportunities available.

D. Teacher-student conference

E. Teacher-student - Parent conference

Methods:

1. Field trip
2. Speaker (Counselor) (Coop Coordinator)
3. Role playing

March 10 - D.S. - All students. Periods 2,3,7. Bill Weirick will present the coop program at the high school.

March 13,14 - D.S.-All students. Time to be arranged. Students to be bused to the high school to view the occupational program.

March 16 - 2:15 - Jesse Defiore to speak. Importance of Early Preparation.

March 20,21 - D.S. - All students from Ring Lardner. Time to be arranged - students to walk to high school to view occupational program.

March 20 - Ballard 9th grade orientation and parent night - M.L.B. to have details.

March 21 - Ring Lardner 9th grade orientation and parent night - M.L.B. to have details.

PHASE VI EVALUATION

March 20 - All students. Advisory and 1st period. All advisory committee members will work with students in small groups to discuss and evaluate unit.

Have students fill out form (See Appendix F) for evaluation purposes.

Advisory committee members to report their impressions of evaluation.

Evaluation results (See Appendix G)

APPENDIX A

Picture (Overhead Projector - Dejected graduate leaving employment office)

Picture of graduate

1. Dejection
2. Poorly dressed
3. Diploma in hand

Part I - Phase I

A. Transparency on screen (Rejected graduate in personnel office)

   1. Overlay on transparency - (Will this be you in 1970?)
   2. Allow time for class to notice

NARRATOR: J.D.

1. Call attention to the picture on the screen
2. Explain this will be a scene repeated in many personnel offices across the country.
3. Call attention to the diploma. Graduation from high school or college does not guarantee a job.
4. Call attention to the appearance of the person seeking the job. Proper dress is important when applying for work.
5. WHAT CAUSED THIS TO HAPPEN? Why is the personnel director refusing this person a job?

Now we are going to have a little play. We are going to show how this did happen.

Personnel Director - Bill Davis
Recent graduate - Dan Stevens

SCENE I - PHASE I (Personnel Director and Graduate interview)

Personnel Director seated at desk.

Recent graduate enters.

P.D. Hello, may I help you?
R.G. Yes, I'm looking for a job.
R.D. Are you answering our ad? (Put ad on screen)
R.G. Yes
P.D. What kind of a job are you looking for?
R.G. I didn't have any job in mind. Your ad said you are hiring production workers.
P.D. Do you have any experience on production work?
R.G. I don't know what a production worker does.

P.D. Do you have any training?
R.G. High School
P D. What kind of training did you take in high school?
R.G. I took a general course.
P.D. What occupational plan did you follow?
R.G. I don't think I know what you mean.
P.D. What kind of courses did you take in high school?
R.G. Regular Courses.
P,D. I mean, did you take drafting?
R.G. No.
P.D. How about Machine Shop?
R.G. No.
P.D. Did you take any shop courses?
R.G. No. I did take typing and sales.
P.D. We need people who can run machines. What are your future goals?
R.G. I don't know. I never thought about it.
P.D. I'm sorry, I don't see how we can use you in our concern. Maybe if you get some machine training you can come back and see me.

Exit - Recent Graduate

Personnel Director turns to audience.

1. You have just seen a play where a person was not hired. I would like to explain some of the reasons this person was turned down for the job. You noticed he did have a diploma. This doesn't guarantee him a job, but it usually gets the person an interview. Many companies today will not hire a high school drop-out.

2. Another reason he was turned down was he didn't have specific training for the job we had to offer, and he also didn't have a specific job in mind.

3. His education was of a general nature as he had not followed an occupational plan while in high school. He didn't even have the basic types of courses where he could be put through a training program.

4. His future plans were vague and he was undecided as to what he really wanted to do for a living. This makes him a very poor risk as an employee.

NARRATOR: We have seen and heard reasons as to why this person did not get the job. What happened during his education experience that forced him into this unfortunate situation. We would like to show you two scenes that will help clarify this.

SCENE II Family discussion. Student has presented tentative four year plan to parents that was worked out by counselor and student.

Student - Dan Stevens
Mother - Janet Dalman
Father - Louis Griffin

NARRATOR: The scene opens in the students home. The student has just brought home an occupational plan from school to work out his courses for next year.

(SHOW OCCUPATIONAL PLAN ON THE OVERHEAD)

WHAT HAPPENS

1. Parents reject 4-year plan because it is not college prep.
2. Student wants to go to work as clothing salesman after graduation. (Works in this area during summers)
3. His goals and parents' do not coincide.
4. They argue.
5. Student leaves - upset and mad.

SCENE II - PHASE I Student enters and shows occupational plan to mother.

S. Mother would you help me plan my courses for next year?
M. Certainly, let me see what you picked.

(Student hands occupational plan to mother.)

M. What is this? Why are you taking business?
S. Because I want to go into business. You know, I like to work in a store.
M. You're going to college. You know we want you to be an engineer.
S. But I don't like math and science.
F. You listen to your mother. You want to end up dumb like me?
S. I don't see why you think you're dumb because you didn't go to college. You said you made ten thousand dollars last year.
F. That doesn't make any difference. I want you to go to college.
M. You know, son, that your father and I always dreamed of you being in college.
S. I talked to my counselor and he believes I should learn to be what I want to be.
F. Who does your counselor think he is that he tells you stuff like that.
M. Why don't you tell your counselor that we want you to go to college?
S. I did. He says I should have four years of math and I don't like math. I failed Algebra.
M. So you can take it over.
S. No, I can't. I can, but I don't want to.
F. If you're not going to college what can you learn to be?
S. I'm disgusted. Everytime we try to plan my courses we can't agree.
M. Well, why don't you just tell your counselor you want to go to college and be an engineer?
S. Mother, you just don't understand. I just don't like the idea of going to college. I'm so confused, how can I plan anything? I think I'll go downtown. (Exit student)

NARRATOR: Further discuss what has taken place

1. Unrealistic goals of parents
2. Do not consider student's abilities, interests, etc.
3. What then happens when student returns to see counselor after rejection of 4-year plan by parents?

SCENE III Counselor-Student interview

Counselor - Eunice Johnston
Student - Dan Stevens

Counselor explains to audience - Student never returned to further discuss, etc.

SCENE III - PHASE I

NARRATOR: The last scene in our little play takes place in the counselor's office. The student has brought the occupational plan back to school after discussing it with his parents. (Student enters counselor's office.)

C. Hello, I see you brought your plan back. Did everything go all right?
S. No, my parents think I ought to go to college.
C. Is this what you think too?
S. No. I want to study to be a store manager.
C. I think this is a good idea.
S. Yeah, but my parents want me to be an engineer.

C. Most engineers go to college and you would have to take at least 3 years of math - four would be better. Your record shows you didn't do too well in this area.
S. I know, I failed Algebra. Anyway, I hate math.
C. What is the matter with the courses we planned?
S. I don't know. I get so mad sometimes, I don't care what I take - just so I get out of school.
C. Wouldn't it be a good idea for you and I and your parents to talk this over?
S. I don't think so. They would just insist that I go to college.
C. Well, you probably can get into college, but I doubt if you can be an engineer unless you take math and Science.
S. You know I don't like math and Science.
C. Shall I call your parents about this?
S. No. Just put me down for easy courses. All I want to do is graduate so I can get a job.
C. I can't choose your courses for you. You have to make this decision.
S. OK, I'll wait then and decide later.
C. If you have any questions, please come in so we can talk about it.

*3. Counselor explaining results of interview:

1. Parents goal for student and student's interest are in conflict. The parents want the student to go to college and become an engineer, not taking into consideration the ability of the student. The student not being able to solve the problem, rejects other suggestions by counselor. Student finds himself unable to continue college prep program because of low ability in math and ends up choosing subjects at random which leads to no definite occupational plans. The student drifts through high school with very little interest in his subjects and fails to realistically plan for the future within his ability and interest areas.

NARRATOR: Review briefly what has been covered in the various scenes
Show list of purposes of course on overhead. (Items listed under Phase I)
Also apply all of what has been discussed to college bound student.
Then. What is coming up? Give brief overview of sox week unit.

FINAL NARRATION: The short scenes you have just seen represent what can happen many times to high school and college graduates. The person that dies not finish high school has even less chance of getting the kind of work he wants.

Finishing high school is very important, becuase most organizations that hire employees are usually not interested in drop-outs, either from high school or college.

The organization who hires employees want people who have something to sell or offer to them. They are buying skill and training and if you do not have the skill or training, they usually are not interested in spending their money on an inferior product. You wouldn't buy a car that didn't have a motor. The employer is not intrested in buying a person that doesn't have a motor or skill to make him go.

Planning your future should begin now. The sooner you start the easier it will be. In the next few weeks we will bring you speakers who will represent industry and business in Niles. You will see films and hear panels that will discuss the many areas of choosing an occupation. There will be a field trip to the high school to see the many kinds of courses you will be able to choose from next year.

You will see and hear about the many different kinds of work people do to make a living.

You will hear and see how people get the training to do these jobs.

You will be shown how to examine your interests and abilities so you can choose wisely.

You will hear about automation and future jobs. The kinds of jobs you will be taking in the 1970's and 1980's.

We hope in the next few weeks to make you aware of your future. We want to assist you in planning that future.

Let us hope that everyone of you can plan wisely now and avoid mistakes now and in the future.

The rest is up to you. If you need help, your teachers, counselors and other people will be willing to assist you.

APPENDIX B

MALE____ FEMALE ____

Please be as specific as you can be when answering the following questions. For example: Father's occupation would not be works at Kawneer but rather lathe operator.

1. What does your father (step-father) do for a living?____________________

____

2. What was the first full-time job he held?____________________

____

3. If your mother (step-mother) is employed full-time, what is her occupation?

____

4. If she is not now employed, what was her last full-time job?____________________

____

5. What was her first full-time job?____________________

____

6. What training other than high school does your father have? (trade school, apprenticeship, college, etc.)____________________

7. What training other than high school does your mother have? (beauty school, business school, college, etc.)____________________

8. What do you see now as your future occupation?____________________

____

9. What other job or job areas would you like to have discussed in this occupational course?____________________

The questionnaire which was given to the students at the beginning of the occupational unit had a three-fold purpose. One was to give the committee an idea of the vocational background of the parents of the ninth graders. Another was to discover the direction these students thought they were going vocationally. The third and possibly most important was to make the students discuss with their parents the world of work and possibly create some interest at home.

Sixty percent of the questionnaires were returned. The tabulations showed that 45 percent of the fathers were involved with manufacturing in some capacity and 60 percent of the men held blue collar type jobs. Twelve percent of the fathers held jobs in the transportation and communication fields and that same number in the wholesale and retail areas while 16 percent were involved with service occupations. The other 14 percent were spread over 4 other occupational families.

Twenty-six percent of the boys mentioned jobs related to manufacturing and only 10 percent indicated blue collar jobs as goals. Thirty percent of the boys were uncertain and did not state a future occupation for themselves. Of those who did make a choice, over 50 percent chose jobs that would require a preparation of 4 years of college or more.

Of the mothers 52 percent were involved in the manufacturing area dnd 70 percent of those jobs were not related to office work. Seventeen percent were secretaries, nurses, teachers, or beauticians. None of the girls indicated she had as her goal factory work that was not connected with office jobs and 65 percent wanted to be nurses, beauticians, teachers, and secretaries with the latter being the most popular. Fourteen percent of the girls were uncertain about their future occupations and 42 percent chose vocations that require 3 or more years of college preparation. Twenty-five percent of the mothers were in service occupations while 51 percent of the girls chose jobs in the service area as their goals.

Since the students did not put their names on the questionnaires, there was no attempt to check the student's choice with the records.

APPENDIX C

9th GRADE OCCUPATIONAL INFORMATION

The purpose of the Occupational Information course is to help acquaint you with as many different kinds of occupations as possible.

FREEDOM TO CHOOSE

You are free in this country to choose from among approximately 25,000 different jobs. No one is going to dictate to you. No one can make you work at a job you do not want, but you will probably have to do some kind of work if you intend to earn a living.

Your future in the world of work is too important for a snap decision. It is equally unwise to drift into just any kind of work that may be available at the moment.

The important thing to remember is; someday you will have to make a choice. If you have planned and prepared as you go along, the final choice you make will probably be the wisest and most satisfying choice for you.

IMPORTANCE OF EARLY EXPLORATION

When you were very young you probably told adults that when you grew up you wanted to be a test-pilot, a nurse, doctor or a policeman, depending upon whom you admired at that particular moment. All small children express themselves this way because adults ask the question, and children have a limited knowledge of the world of work.

As you grow older you become more informed and your ideas about the world of work become more realistic. Probably your choice of a future occupation is still tentative and you will probably change your mind several more times before you settle on the kind of work you will eventually be doing.

It is important that you have a tentative goal to try to reach.

1. It makes it easier for you to plan the courses you will take at the high school.
2. In making plans you will discover that you have certain interests.
3. You will discover there are some things you do better than others.
4. You will start to discover something about yourself and the kind of personality you have.

To know your interests, abilities and personality will help you plan your future wisely.

APPENDIX D

PROCEDURES IN THE INVESTIGATION OF A VOCATION

Let us begin by answering some questions.

1. Do you intend to go to work immediately after graduation from high school?
2. Are you planning to enter a trade or technical school?
3. Do you plan to enter a 2 or 4 year college?

Your decision will have a strong influence on the kind of courses you will take in high school.

Educational and training requirements have been established for almost every occupation in this country, so it is wise to know as much about the occupation you have chosen as you can learn.

The following is a list of: What to look for when choosing a tentative goal or occupation.

1. Description of the work
2. Wages and earnings
3. Working conditions
4. Hours of work
5. Ability required
6. Temperment required
7. Education and training required
8. Advantages and attractive features
9. Disadvantages
10. Outlook for the future
11. Licensing, unions, organizations
12. Methods of entering work
13. Suggested high school courses
14. Suggested high school activities
15. History of the occupation

By using this list as a guide it will enable you to gather enough information to see the kinds of jobs.that best fit your interests, abilities and personality.

Your counselors have many different descriptions of occupations to show you in the guidance office. They can guide you in planning an occupational goal. If you act now, your chances of choosing the right courses for high school are greater than they will be if you delay.

It may surprise you in a year or two to find you have made a definite choice of a vocation.

JOB FAMILIES AND AREAS OF INTEREST

ADVERTISING

AGRICULTURE

BUSINESS AND OFFICE

COMMUNICATION

CLOTHING AND TEXTILES

CONSTRUCTION

ELECTRONICS

FINANCE

FOODS AND COOKING

INDUSTRIAL

LAW

MEDICINE AND HEALTH

RECREATION AND ENTERTAINMENT

SALES AND MARKETING

SOCIAL AND WELFARE

SERVICE

TRANSPORTATION

JOB FAMILIES AND AREAS OF INTEREST

ADVERTISING

- Commercial Artist
- Photographer
- Market research analyst
- Printer
- Advertising manager
- Display and window trimmer
- Technical writer
- Technical illustrator

AGRICULTURE

- Dairy Technologist
- Livestock Trader and Buyer
- Agricultural Research Worker
- Retail Florist
- Farm Manager
- Truck Farmer
- Tree Expert
- Milkman
- Beekeeper
- Agronomist
- County Agricultural Agent
- Soil Scientist
- Landscape Architect
- Agricultural Writer
- Fur Farmer
- Forester
- Aerial Crop Sprayer
- Feed Dealer
- Landscape Nurseryman
- Poultry Farmer
- Dairy Farmer
- Tractor Mechanic
- Livestock Farmer
- Irrigation Engineer
- Grain Elevator Superintendent
- Cowboy
- Garden Supply Store Owner
- Agricultural Economist
- Farmhand
- Grain Shoveler
- Feed Dealer
- Fish and Wildlife Manager

BUSINESS AND OFFICE

- Office Manager or Administrator
- Office Clerk
- Secretary
- Stenographer
- Typist
- Receptionist
- Administrative Male Secretary
- Business Machine Repairman
- Date Processing Programmer
- Billing Machine Operator
- Key Punch Operator

COMMUNICATION

- Proofreader
- Editor
- Writer
- Interpreter and Translator
- Lithographer
- Mail Carrier and Mail Clerk
- Printer and Pressman
- Publisher
- Radio and Television Technician
- Telephone and Telegraph Operator
- Radio Announcer
- Newscaster or Commentator

CLOTHING AND TEXTILES

- Clothing Salesman or Saleswoman
- Drycleaner and Laundry
- Modeling
- Clothing Display and Window Trimmer
- Dressmaker
- Tailor
- Knitter
- Mender
- Embroiderer
- Upholsterer
- Fashion Designer

CONSTRUCTION

- Architect
- Architectural Draftsman
- Brick, Stone, Block and Tile Mason
- Cabinetmaker
- Carpenter
- Carver and Stone Cutter
- Cement and Concrete Worker
- Electrician
- Excavator and Grader
- Floor Layer and Finisher
- Painter and Paperhanger
- Plasterer
- Plumber
- Roofer
- Sheet Metal Installer
- Welder
- Building Contractor
- Lumber Yard Manager

ELECTRONICS

- Electronics Engineer
- Electronic Technician
- Maintenance Electrician
- Draftsman
- Assembler
- Radio and Television Repairman

FINANCE

- Auditor and Accountant
- Appraiser - Real Estate, Art and Antiques
- Budget Analyst
- Bank Teller
- Bank Clerk
- Bank Guard
- Cashier
- Credit Manager
- Insurance Agent
- Insurance Underwriter
- Real Estate Broker
- Investment Broker
- Securities Salesman

FOODS AND COOKING

- Baker
- Cook
- Chef
- Dietitian
- Hostess
- Steward
- Kitchen Worker
- Waiter
- Waitress
- Bartender
- Restaurant Operator

INDUSTRIAL

- Casting and Molding Operator
- Data Processing Machine Operator
- Draftsman and Tool Designer
- Furniture Maker and Repairman
- Metallurgist and Heat Treat Worker
- Machinist
- Tool and Die Makar
- Maintenance Man
- Mechanic
- Machine Repairman
- Plant Manager
- Packing and Shipping Department Manager
- Patternmaker, Wood and Metal
- Personnel Manager
- Purchasing Agent
- Factory Layout Man
- Mechanical Engineer

LAW

- Insurance Adjustor
- Judge
- Lawyer
- Policeman
- Detective
- FBI Agent

LAW (Continued)

- Probation Officer
- Sheriff
- Politician
- Legal Secretary
- Guard or Watchman
- Conservation Officer

MEDICINE AND HEALTH

- Dentist
- Dental Technician
- Hospital Dietitian
- Masseur
- Blight and Pest Control Man
- Practical Nurse
- Registered Nurse
- Pharmacist
- Physician
- Veterinarian
- Medical Technician
- Hospital Orderly
- Medical Secretary
- Medical Librarian
- Funeral Director
- Doctor of Osteopathy
- X-Ray Technician
- Optician
- Chiropractor
- Physical Therapist

RECREATION AND ENTERTAINMENT

- Dancer
- Actor
- Actress
- Fishing Guide
- Games and Toy Salesman
- Games and Toy Manufacturer
- Professional Golfer
- Hunting Guide
- Motion Picture Projectionist
- Music Teacher
- Professional Musician
- Sporting Goods Salesman
- Sporting Goods Manufacturer
- Radio and Television Station Worker
- Park Ranger
- Recreational Services Director

SALES AND MARKETING

- Butcher and Meat Cutter
- Farm and Garden Equipment Salesman
- Prepared Food Salesman
- Fuel and Petroleum Products Salesman
- Furniture Salesman

SALES AND MARKETING (continued)

- Fur Salesman
- Nursery Stock Salesman
- Industrial Equipment Salesman
- Insurance Agent
- Jewelry Salesman
- Leather Goods Salesman
- Stationary and Paper salesman
- Drug Salesman
- Stock Clerk
- Store Manager
- Store Buyer
- Checkout Clerk
- Manufacturer's Representative

SOCIAL AND WELFARE

- Clinical Psychologist
- Family Service Director
- Handicapped Placement Specialist
- High School Counselor
- Marriage Counselor
- Probation Officer
- Public Health Nurse
- Social Worker
- Sociologist

SERVICE

- Barber
- Cosmetologist
- Refuse Haulers
- Appliance Repairman
- Lawn and Garden Equipment Repairman
- Fireman
- Groundskeeper
- Hotel Clerk
- Motel Manager
- Babysitter
- Information Clerk
- Custodian
- Manicurist
- Auto Mechanic
- Mover and Storer
- Teacher
- Parking Lot Serviceman
- Pilot
- Service Station Operator

TRANSPORTATION

- Civil Engineer
- Auto Dealer
- Marine Engineer
- Material Handler
- Truck Driver

TRANSPORTATION (continued)

Traffic Manager
Airline Stewardess
Receiving and Shipping Clerk
Surveyor
Highway Engineer
Aircraft Mechanic
Routeman
Heavy Equipment Operator

APPENDIX E
DISCOVERING YOUR INTERESTS

One of the important factors in choosing a career is discovering the things in which you have an interest.

Ask yourself these questions:

1. Which of the following do I like to do?

   a. Work with objects; such as motors, tools, clothing, foods, test tubes, etc.
   b. Work with people; as in sports, clubs, committees, play, etc.
   c. Work with ideas and facts; such as wroting, reading, or working with problems.

2. Which subjects in school do I like best:
   a. Shop
   b. Mechanical Drawing
   c. Homemaking
   d. Mathematics
   e. Science
   f. History
   g. Geography
   h. Music
   i. Gym
   J. Art
   k. Speech
   l. English
   m. Agriculture
   n. Foreign language

3. What kind of hobbies do I have?

4. Do I like to work alone or with others?

Now compare your answers. Are you getting a picture of your interests?

ABILITIES

Another factor in being successful depends upon your ability.

Ask yourself these questions:

1. What activities do I do best?

2. Are my grades the highest in the subjects I like best?

3. Am I choosing those subjects that will help me do the activities I like, better?

Take a look at your abilities and compare them with your interests. Do you have a better picture?

Maybe you are still undecided about your interests and abilities. Get the advice of your parents, guidance counselor, teacher or others who can help you.

You might want to take an interest or an aptitude test to see yourself a little better. Your guidance counselor is willing to help you.

EVALUATION QUESTIONNAIRE

MALE _____ FEMALE _____

Yes____ No____ 1. Have you discussed your future goals or occupational choices with your parents since this unit started?

Yes____ No____ 2. With your friends?

Yes____ No____ 3. With your teachers?

Yes____ No____ 4. Have you become more aware of occupational opportunities since this unit started?

5. Do you at this time plan to take training beyond high school graduation? None___Some___6 Mos.___1 Yr.___2 yrs.___4 yrs.___

6. In which occupational field are you interested at this time?

____

7. Which presentation did you like best?__________________

____

8. Which presentation did you like least?__________________

____

9. Do you think the program should have:

more____	Fewer____	No Change____	Panels
More____	Fewer____	No Change____	speakers
More____	Fewer____	No Change____	films
More____	Fewer____	No Change____	plays (skits)
More____	Fewer____	No Change____	Group discussions
More____	Fewer____	No Change____	field trips

10. Is there anything you would like to know that we did not include in this unit?______________________________

____

11. Do you have any suggestions for improvement as to how this unit can be made more interesting?

APPENDIX G

EVALUATION

Student evaluation of the Occupational Information unit took place on March 20, 1967 during advisory and part of the 1st period. All team members participated in the evaluation which consisted of completion of a questionnaire and group discussion. Of the 234 students filling out the questionnaire, 118 were boys and 116 were girls.

CHART A

1. Have you discussed your future goals or occupational choices with your parents since this unit started?

	Boys	Girls	Both
Yes	68%	82%	75%
No	32%	18%	25%

2. Have you discussed your future goals or occupational choices with your friends since this unit started?

	Boys	Girls	Both
Yes	62%	86%	74%
No	38%	14%	26%

3. Have you discussed your future goals or occupational choices with your teachers since this unit started?

	Boys	Girls	Both
Yes	25%	29%	27%
No	75%	71%	73%

CHART B

4. Have you become more aware of occupational opportunities since this unit started?

	Boys	Girls	Both
Yes	82%	87%	85%
No	18%	13%	15%

5. Do you at this time plan to take training beyond high school graduation?

	Boys	Girls	Both
None	11%	10%	10%
Some	25%	23%	24%
6 Months	2%	3%	2%
1 Year	3%	4%	4%
2 Years	9%	15%	12%
4 Years	50%	45%	48%

CHART C

6. In which occupational field are you interested at this time.

BOYS

22% - Service occupations
14% - Industrial occupations
11% - Medicine and Health
39% - Divided between all other occupational fields
14% - Undecided

GIRLS

31% - Service occupations
23% - Business and office occupations
18% - Medicine and Health
16% - Advertising, communication, transportation
12% - Undecided

7. Which presentation did you like best?

8. Which presentation did you like least?

30% liked Dr. Defore's speech "Chance or Choice" best.
4% liked it least.
14% liked the presentation of services best.
13% liked it the least.
15% liked the presentation on medicine best.
13% liked it the least.

CHART D

9. Do you think the program should have more, fewer or no change?

BOYS

	MORE	FEWER	NO CHANGE
PANELS	30%	31%	39%
SPEAKERS	30%	45%	39%
FILMS	83%	3%	14%
PLAYS	53%	20%	27%
GROUP DISCUSSIONS	22%	35%	43%
FIELD TRIPS	88%	2%	10%

GIRLS

	MORE	FEWER	NO CHANGE
PANELS	28%	20%	52%
SPEAKERS	23%	36%	41%
FILMS	85%	2%	13%
PLAYS	60%	12%	28%
GROUP DISCUSSIONS	28%	29%	43%
FIELD TRIPS	95%	-	5%

Thirty-nine percent of the boys and 52% of the girls felt there should be no change in the panel presentations.

Forty-five percent of the boys and 36% of the girls felt there should be fewer speakers, but 41% of the girls felt there should be no change.

Eighty-three percent of the boys and 85% of the girls felt there should be more films.

Fifty-three percent of the boys and 60% of the girls felt there should be more plays. (skits)

Forty three percent of both boys and girls felt there should be no change in the group discussions.

Eighty-eight percent of the boys and 95% of the girls felt there should be more field trips.

CHART E

10. Is there anything you would like to know that we did not include in this unit?

    1. Some information on colleges.
    2. Information on summer jobs.
    3. More information on jobs for girls.
    4. Information on professional sports.
    5. High school subjects related to job areas.

11. Do you have any suggestions for improvement as to how this unit can be made more interesting?

    1. Give more detail about specific job areas.
    2. Do not take time from physical education classes.
    3. Hand out more literature about jobs.
    4. Give assignments
    5. Have group discussions according to interest.
    6. Have students attend only those programs in which they have an interest.
    7. Include students from high school to tell about the high school courses.

ADVISORY COMMITTEE IMPRESSIONS:

The reports from the Advisory Committee members substantiate the results of the questionnaire to the extent that the questionnaire appears to be valid.

Charts A through E give further detail to the results of the questionnaire.

BIBLIOGRAPHY OF SUGGESTED FILMS

Area	Title	Book & Page
Agriculture	Dynamic Careers thru Agriculture	Free 21*
"	A Step Ahead	Free 238
"	Your Career in Agriculture (Forestry)	Free 241
"	Your Future in Trees (Tree Specialists)	Free 242
Business	Future Unlimited (banking)	Free 232
"	How to Get Where You Want to Go (selling cars)	Free 233
"	How the Commercial Artist Works	Free 232
Homemaking	The Designer (art)	Free 305
"	I Open the Door (Home demonstration)	Free 233
"	View from the Mountain (Careers in dietetics)	Free 241
T & I	Occupation Auto Mechanic	Free 235
"	Precision Tool Making & Machinery	Free 236
"	Careers in Trucking	Free 240
"	Your Future in Electronics	Free 242
"	Basic Principles of Printing	Free 334
"	The Story of the Weldwood House	Free 356
"	New Dimensions in Concrete	Free 423
College Prep	Career: Medical Technologist	Free 245
"	Industrial Education in Your Future(Stout)	Free 233
"	New Life for Lisa (Nursing)	Free 235
"	Jobs in Atomic Energy	Free 234
"	This is Pharmacy	Free 239
"	Engineer - Man of Destiny	Sterling Movies, USA
Process of Choosing	Planning Your Career	EB Films
	The Big Question	Free 229
"	The Road Ahead(Importance of high school)	Free 237
"	Benefits of Looking Ahead	Coronet
"	Choosing Your Occupation	Coronet
"	How to Investigate Vocations	Coronet
Attitudes	You and Your Work	Coronet
5 conditions of earning power	Your Earning Power	Coronet

* 26th Ed Educator's Guide to Free Films

VT 005 585
Voth, Theodore H.
Expectations of Oklahoma Firms Concerning Occupational Curricula for State Junior Colleges.

Oklahoma Vocational Research Coordinating Unit, Stillwater
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 68 9p.

*VOCATIONAL EDUCATION; *JUNIOR COLLEGES; *CURRICULUM RESEARCH; *EMPLOYER ATTITUDES; COURSES; EDUCATIONAL OBJECTIVES
OKLAHOMA

A sample of 55 industrial and business employers was surveyed to identify junior college curricula features which they considered important in occupational education. Responses indicated: (1) 47 preferred a 2-year curriculum including general education courses, while seven preferred a 1-year straight vocational course, (2) 32 favored 25 percent general education, 11 favored 35 percent general education, six favored 15 percent general education, and four favored 45 percent general education, (3) 24 favored an equal amount of classroom and skill development activities, 17 favored 25 percent classroom and 75 percent skill development activities, and 13 favored 75 percent classroom and 25 percent skill development activities, (4) 43 favored programs aimed at career development, while 12 favored job skill development, (5) 26 employers indicated junior college programs were highly desirable for experienced workers, and 23 employers indicated such programs would be desirable for experienced workers, (6) The employers identified eight curricula which should be given more attention and seven curricula which should be implemented.(EM)

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Expectations of Oklahoma Firms Concerning

OCCUPATIONAL CURRICULA for STATE JUNIOR COLLEGES

by Theodore H. Voth

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Vocational Research Coordinating Unit
Oklahoma State University
Stillwater, Oklahoma

VT005585

Expectations of Oklahoma Firms Concerning Occupational Curricula of State Junior Colleges

I. Purpose of the Study

This study has for its purpose the discovery, in fairly specific terms, of what selected persons in major Oklahoma industries and businesses consider to be desirable features of the occupational curricula of the state's junior colleges.

Questionnaires were sent to (1) sixty-eight of the leading industrial and business companies of Oklahoma in terms of numbers of employees, as indicated in "The Directory of Oklahoma Manufacturers and Products", published by the Oklahoma Industrial Development and Parks Commission, and (2) seven firms indicated by presidents of two of the junior colleges to be employers of graduates of their institutions. The fifty-five responding firms are listed in the appendix.

It is hoped that these responses of employers will lead to findings and insights that will be helpful in the future planning of the curricula of the state's junior colleges, although one must recognize that the study is not at all exhaustive.

II. Features of Occupational Curricula Suggested by Response to the Questionnaire

In this section, the results of the responses to each question will be enumerated, and the features of a curriculum they suggest will be discussed. In some instances, a few reflections on the significance of the point of view the results express will be included.

One consideration should be kept in mind as the results are evaluated. The responses are made by a single person in each firm, perhaps, the personnel manager, the owner of the firm if it is a small one, or some other official. In any case, it should be borne in mind that the response of another person in the same firm might well have been different.

QUESTION ONE. Which of the following types of programs, A or B, is preferable as preparation for a career employee in your company?

1

Program A: a post-high school two-year training period which is one hundred percent vocational technical;

Program B: a post-high school two-year training period which is primarily vocational-technical but includes courses in general education such as English and the humanities, citizenship, natural and social sciences.

Of the 55 employers responding, 47 (85%) preferred program B, 7 (13%) preferred program A, and one had no opinion. It is quite striking that the opinion is so heavily weighted in favor of including courses in general education such as English, humanities, natural and social sciences, in a two-year vocational-technical training program.

It could be hypothesized that these figures indicate a belief by employers that if students are introduced to the meanings of their culture while they are training for a particular role within that culture, then the will and the motivation of the student is strengthened. A person is a better performer if he has an understanding of what is happening both within society and within the circle of his own relationships. Also, a person is enabled to adjust more adequately to the changes he can expect to encounter, both in his own specialty and in society, if his outlook has been broadened by general education courses. The dangers of narrow specialization can be counteracted by the inclusion of "general education" subjects which keep alive the world of ideas and of human relationships.

It is a fact of life that for a high proportion of students, in both two- and four-year institutions, college life is primarily "preparation for a job." Hence, it becomes the responsibility of the educational institution to strengthen the opportunities by which such students may identify with the values and outlook of a democratic culture such as ours. Herein lies at least one justification for "general education."

QUESTION TWO.

2

Suppose that a post-high school two-year training period does include certain courses in general education (as suggested in Program B of the previous question). Check what you would estimate to be the most desirable percentage of courses in general education for such training:

15% ☐ 25% ☐ 35% ☐ 45% ☐

Thirty-two (58%) of the 55 employers responding favored 25%, 11 favored 35%, 6 favored 15%, 4 favored 45%, and two had no opinion.

A figure between 25 and 30 is indicated as the percentage of "general education" courses considered desirable by this group of employers.

QUESTION THREE.

3

This question deals with the distribution of the time in the two-year program which is spent in the vocational-technical training. Check which of the following distributions of time, A, B, or C, is the most desirable:

	Distribution		
	A	B	C
Percent of time spent on theory and development of background knowledge (as in lectures and other theoretical presentations).	25%	50%	75%
Percent of time spent on development of skills (as in the laboratories, workshops, and offices).	75%	50%	25%

Distribution A ☐ Distribution B ☐ Distribution C ☐

Twenty-four (44%) of the 55 employers preferred distribution B, 17 (31%) preferred distribution A, 13 (24%) preferred distribution C, and one had no opinion.

There is no well-defined trend in these answers. It might be generalized that these employers favored a technical training program about evenly distributed between theory and the development of skills, with slightly more emphasis on the development of skills.

It should be borne in mind that today, unlike in past generations, the work "skills" refers not so much to manual dexterities and neuro-muscular adaptions as to activities involving the cognitive and intellectual powers.

QUESTION FOUR. Which of the following types of programs, A or B, is to be preferred as preparation for a career-employee in your company?

4

Program A: background knowledge and understanding of a field or subject, with intensive training in one application only of this knowledge (this means less on-the-job training by the employers);

Program B: background knowledge and understanding of a field or subject, with training in several applications and hence less intensive training in any one application (this means more on-the-job training by the employer and more preparation for the employee's future career).

Forty-three (78%) of the 55 employers responding favored program B, 12 (22%) favored program A.

The figures here indicate the consensus of most of these employers that a vocational training program should prepare the student for more than an entry-type job; it should prepare him for a life-long career. The figures also suggest a recognition by most of the employers that in the future vocations will be characterized by changing tasks and skills, so that preparation should strengthen a person's capacity to change as occupational patterns change.

QUESTION FIVE. Check how you would rate the possibility of having experienced workers obtain further training in preparation for new technical positions if a junior college or community college made this training available:

5

Highly Desirable ☐ Desirable ☐ Acceptable ☐

Not Necessary ☐

Twenty-six employers checked "Highly Desirable", 23 checked "Desirable", four checked "Acceptable", one checked "Not Necessary", and one had no opinion.

The "further training" mentioned in question five is a reference to an adult education program, which is one of the three main features of the community comprehensive college, the other two being the academic transfer and vocational programs. If the numbers of employers who checked "Highly Desirable" and "Desirable" are added, it could be justifiably stated that 89% of the group would look with favor on the comprehensive community college concept.

6

QUESTION SIX. Sixty-nine occupation-centered curricula suited to the program of a junior college were listed, and each employer was asked to rate the degree to which, in his opinion, each of them would be helpful in preparing a person to qualify for a position in his company. Thus, each curriculum was placed by the employer in one of the following four classes: A - helpful to a high degree; B - helpful to a moderate degree; C - helpful to a slight degree; or D - not related.

It is important to mention here that although the results obtained are significant, the point of view they represent should be clearly understood. The questionnaire was sent only to the leading industries and businesses of Oklahoma, and consequently the responses point to the set of curricula that would be helpful to them. Responses from service and welfare agencies, and even from small businesses and industries, might almost certainly indicate a preference for a different set of curricula.

A "consensus number" was computed for each curriculum to provide a technique for selecting those curricula "most helpful" in the preparation for employment in Oklahoma businesses and industries. The computation of the consensus number is illustrated in the case of the curriculum, "Accounting and Bookkeeping." Twenty-six of the 55 employers placed this curriculum in Class A, 21 placed it in B, five in C, and three in D. If values of 3, 2, 1, and 0 are assigned to the classes A, B, C, and D, respectively, the consensus number for Accounting and Bookkeeping is

$$\frac{(3 \times 26) + (2 \times 21) + (1 \times 5) \quad (0 \times 3)}{55} = \frac{125}{55} = 2.3$$

The curricula with consensus numbers of 1.2 or greater have been listed in Table 1. (The choice of 1.2 as the index of selection here is a matter of judgment). Also, in the table, an effort has been made by the writer to show the manner in which Oklahoma's six state junior colleges relate to this set of curricula. Classifications in the table indicate, for each curriculum, the number of colleges offering a comparable terminal curriculum, a closely related transfer program, or a significant fraction of the courses in the curriculum.

The results show that existing curricula correspond, to an appreciable degree, with the curricula recognized as being helpful by the employers who responded. However, an analysis of the 19 curricula listed into three categories is of value.

Table I

Relation of Occupational Cirricula With Highest Consensus Numbers to Curicula of Oklahoma's State Junior Colleges

		Number of State Junior Colleges in Oklahoma		
Occupational Curriculum	Consensus Number*	Offering Comparable Terminal Course	Offering Related Transfer Curriculum	Offering Signigicant Part of Curriculum
Accounting & Bookkeeping	2.3	0	0	6
Data Processing and Business Machines	2.3	2	0	0
General Business Management	1.8	5	0	1
General Office Management	1.7	0	0	3
Industrial Management	1.9	0	0	0
Purchasing Management	1.4	1	0	0
Sales Occupations	1.3	0	0	0
Secretarial and Stenographic	2.6	4	2	-
All-Round Machinist	1.8	1	0	4
Civil Engineering Technology	1.2	1	0	0
Drafting, Mechanical	2.0	1	0	2
Drafting (other than Aeronautical, Architectural, and Mechanical)	1.5	3	2	0
Electrical Technology	1.6	1	1	2
Electronics Technology	1.4	4	1	0
Engineering Aide	1.6	2	2	2
Industrial Technology	1.3	1	5	-
Mechanical Technology	1.6	3	1	0
Programming and Data Processing	1.9	2	0	0
Welding Technology and Metal Fabrication	1.7	1	1	3

* 3 - Helpful to high degree
2 - Helpful to moderate degree
1 - Helpful to slight degree
0 - Not related

First, there are the following five curricula which are being offered as two-year programs (terminal or transfer) in either five or six of the state's junior colleges: General Business Management, Secretarial and Stenographic Training, Drafting (other than Aeronautical, Architectural, and Mechanical), Electronics Technology, and Industrial Technology.

Second, there are the following eight curricula which the responses of the employers indicate should be given greater consideration as two-year terminal programs: Data Processing and Business Machines, All-Round Machinist, Electrical Technology, Engineering Aide, Industrial Technology, Mechanical Technology, Programming and Data Processing, and Welding Technology and Metal Fabrication. Industrial Technology is included in this class as well as in the first because it is a terminal program in only one of the junior colleges. Special note should be taken of the high "consensus numbers" of the two curricula, Data Processing and Business Machines, Programming and Data Processing.

Third, there are the following seven curricula which currently are receiving little or no consideration as two-year programs, either terminal or transfer, and which have been determined as helpful to business and industry: Accounting and Bookkeeping, General Office Management, Industrial Management, Purchasing Management, Sales Occupations, Civil Engineering Technology, Drafting (Mechanical).

III. Conclusion

In the opinion of the writer, a high degree of interest in this topic has been shown. The fact that 55 (81%) of the 68 questionnaires mailed out were checked and returned affirms this opinion.

The interest of employers in additional occupational curricula, and the favor with which they regard the opportunity for the training of experienced workers in new technical positions indicates the need for a growing concept of the junior college. In an era in which the most consistent characteristic is change, institutions should adopt postures of flexibility. It would seem that a change from the concept of the junior college whose main purpose is preparation for academic transfer to the concept of the comprehensive community college, with the triple purpose of academic transfer, terminal vocational training, and community adult education, should be given serious consideration in Oklahoma.

In summary, features of junior college occupational curricula deemed desirable by Oklahoma businesses and industries are seen to be general education courses comprising about 25% of the student's program; time spent on theory and development of skills being about evenly distributed, with significant exceptions; training programs being career-oriented rather than job-entry oriented.

This study has discerned the response of men in responsible positions of industry and business in Oklahoma to the following two-fold need existing in an age of rapid technological change: (1) the increasing need for persons with highly specialized training, and (2) the need for persons with social responsibility, cultural maturity, and capacity for change. That response has been shown by this study to include the following two features: (1) the inclusion of certain innovative and familiar occupational curricula (see Section II, Question Six) in the junior college program, and (2) a strong majority opinion that occupational training should be blended with general education courses which develop in the student understanding of the values and structures of a democratic culture and of the individual's role within it.

Appendix

Firms Responding to Questionnaire

Ardmore
   1. Stromberg-Carlson
      Ardmore Division
Bartlesville
   2. Cities Service Pipe Line Co.
   3. Phillips Petroleum Company
   4. Reda Pump Company
Blackwell
   5. Blackwell Zinc Co., Inc.
   6. Kay Electric Cooperative
Broken Arrow
   7. Braden-Aeromotor Corporation
Broken Bow
   8. Dierks Forests, Incorporated
Dallas, Texas
   9. Texas Instruments Supply Co.
Duncan
   10. Halliburton Company
Guthrie
   11. Oklahoma Furniture Mfg. Co.
Henryetta
   12. Eagle-Picher Industries
Hugo
   13. Wells Lamont Corporation
McAlester
   14. Seamprufe Incorporated
Miami
   15. Crane Company
Muskogee
   16. Griffin Grocery Co.
Oklahoma City
   17. APCO Oil Corporation
   18. C. R. Anthony Company
   19. Capitol Steel and Iron Co., Inc.
   20. Cities Service Gas Company
   21. Continental Baking Company
   22. Fred Jones Manufacturing Co.
   23. Kerr-McGee Oil Industries
   24. Oklahoma Gas and Electric Company
   25. Oklahoma Publishing Company
   26. T. G. and Y Stores, Incorporated
   27. Western Electric Company, Inc.
Ponca City
   28. Continental Oil Company
   29. Sequoia Refining Corporation
   30. Sooner Life Insurance Company
Pryor
   31. Deer and Company, Nipak,
       Incorporated
Sand Springs
   32. Armco Steel Corporation
   33. Commander Finishing Company
   34. Fibercast Company
Seminole
   35. Blue Bell, Incorporated
Shawnee
   36. Shawnee Milling Company
Tinker Air Force Base
   37. Department of the Air Force
Tulsa
   38. Dover Corporation
       Norris Division
   39. Dowell Division
       The Dow Chemical Company
   40. Flint Steel Corporation
   41. Lee C. Moore Corporation
   42. National Tank Company
   43. Nelson Electric Manufacturing Co.
   44. North American Aviation, Inc.
   45. Oklahoma Natural Gas Co.
   46. Oklahoma Tire and Supply Co.
   47. Patterson Steel Company
   48. Public Service Company of Oklahoma
   49. Seisemograph Service Corporation
   50. Service Pipe Line Company
   51. Skelly Oil Company
   52. Sunray D-X Oil Company
   53. Texaco Incorporated
       (Refining Unit)
   54. Tulsa Products Division of Vickers,
       Incorporated
   55. Yuba Heat Transfer Corporation

VT 005 590
Fedel, Joan
Self Examination in Typewriting in a Multiple Class Situation Providing Individualized Instruction.

Colorado State Dept. of Education, Denver
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 64 18p.

*TYPEWRITING; *BUSINESS EDUCATION; *INDIVIDUAL INSTRUCTION; HIGH SCHOOLS; SELF EVALUATION; *SMALL SCHOOLS

The use of individualized instruction for first and second year typing classes in a small school having a total enrollment of about 60 students in seventh through 12th grade is discussed. Data were obtained for a total of 42 students in Typing I and 23 students in Typing II for the years 1960 to 1964. A total of 72 instruction sheets enabled the students to cover the Typing I and II material at individual rates. Timed writings were administered by the students by using continuous taped timings as well as a regular typing timer. Grading was simplified by having the students record their points earned on each job. These changes gave the teacher more time to assist with individual problems, to check the work as it was typed, and to correct technique faults immediately. (PS)

VT005 590

ED033 237

(C.1)
18

~~S000774~~

COLORADO
WESTERN
STATES SMALL
SCHOOLS PROJECT

DOCUMENTATION

SELF EVALUATION IN TYPEWRITING IN A MULTIPLE CLASS
SITUATION PROVIDING INDIVIDUALIZED INSTRUCTION

Mrs. Joan Fedel
Ridgway High School
Ridgway, Colorado
1963 - 64

COLO. STATE DEPT. OF
EDUCATION · DENVER
BYRON W. HANSFORD
COMMISSIONER

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT005590

THE WESTERN STATES SMALL SCHOOLS PROJECT

The Western States Small Schools Project, partly financed by a grant from the Ford Foundation, is designed to help the state education agencies in Colorado, Arizona, Nevada, New Mexico, and Utah in their efforts to improve instruction in the necessarily existent small schools. The Project began January, 1961 and will end August, 1965. Policy Board of the Project is composed of the chief state school officers of the cooperating states. Ralph G. Bohrson, Coordinator of the WSSSP, is headquartered in Denver, at the Colorado State Department of Education.

The Colorado portion of the Project, involving more than two hundred teachers and administrators in approximately thirty schools has been working in the following areas:

-- Ungraded or Continuous Progress Programs

-- Use of Self-Instructional Materials

-- Teacher Education and In-Service Programs

-- Institutes for Rural School Board Members

For additional information concerning the Colorado WSSSP, contact:

Paul M. Nachtigal, Director
Colorado Western States Small Schools Project
State Department of Education
Denver, Colorado 80203

SELF EVALUATION IN TYPEWRITING IN A MULTIPLE CLASS SITUATION PROVIDING INDIVIDUALIZED INSTRUCTION

COMMUNITY

Ridgway is a very small community located on the Western Slope of Colorado in a valley surrounded by rugged mountains. The main industry is ranching, but some of the men work in the mines and others are engaged in the lumber industry. It is the end-of-the-line for the railroad, and the businesses are supported by the tourist trade as well as the local people.. It is the center of an extensive hunting district and is buzzing with activity during the big game season.

SCHOOL

The school is very small and the students are transported from about a nine-mile radius. The average enrollment for the upper four grades is between thirty-five and forty; however, we operate on a six-six basis so our high school also includes the seventh and eighth grades, making a total enrollment of about sixty. There are six classroom teachers handling the upper six grades under the direct supervision of the school superintendent.

NEED

In order to improve the quality of instruction; to provide for individual differences; to eliminate curriculum restrictions; and to make use of limited facilities and personnel; this project was developed. I believe it more adequately meets the needs of the individual learner through the adaptation of the text material to individual progress, as well as provides an opportunity for a student to check his individual progress and quality of work.

Originally, it seemed necessary to teach all the typing classes during one period to facilitate scheduling for the students and for myself. That is still an important reason for my project; however, I believe the most important phase is individualizing instruction. It allows the able and ambitious students to take supplementary courses after completing the required typing course or to start on the Typing II course, thus allowing a student to continue increasing his knowledge and skill. The slow student does not have to try to keep up and can take the time he needs to learn the subject matter and acquire the necessary skill. Since we are not a continuous progress school, we do have minimum standards and time limitations; however, we have a great deal more flexibility than in most conventional schools.

A project similar to this one would seem to be one of the first steps for a teacher to take when preparing for the change-over to a continuous progress curriculum. This type of individualized instruction would not necessarily have to apply to the small school nor to the multiple class situation, but would be applicable to any size class and all different levels of ability.

Try it! After you're over the first hump, which takes a lot of hard work and planning, you'll find you have more TIME TO TEACH!

RESEARCH AND DEVELOPMENT

I have studied the Business Education Concepts and Number Sequence of the Middletown Project[1] and the presentation of Dr. Rollins[2] at the Vail Workshop and feel many of the concepts of the ungraded high school apply to my situation.

My project is based on the need to individualize typing instruction, and there are numerous projects which seem to prove that individualized instruction is effective. The authors of both Gregg Typing[3] and the 20th Century Typewriting[4] stress their success in providing for individual differences through varied amounts of material and optional lessons. Neither text is written for continuous progress. From discussions with other project business teachers, many of us are individualizing instruction, and there should be additional research information available in the near future.

---

1. Middletown Project, Middletown, Rhode Island, a nongraded secondary school.
2. Dr. Sidney Rollins, Rhode Island College, "Ungraded High Schools"
3. John L. Rowe, Alan C. Lloyd, Fred E. Winger, Gregg Typing, 191 Series (Gregg Pub. Co., 1962)
4. D.D. Lessenberry, T.J. Crawford, L.W. Erickson, 20th Century Typewriting, 7th Edit. (Southwestern Pub. Co., 1957)

My project activities first started with the Rocky Mountain Area Project in 1960. I believe it is pertinent to this documentation that you understand a few of the problems encountered during the four years of experimenting in this field and my further plans for developing a sound and reliable study.

During the 1960-61 school year my project was "Teaching Multiple Classes", namely, that of combining Typing I and II as well as combining Typing I with other classes. At the conclusion of that year I wrote an article for the Rural Education Committee which was published in "The Colorado School Journal", December, 1961. During that year I first introduced into my classes the tape recorder for providing instruction to one group leaving me free to assist the others. I also used numerous motivating devices, the magnetic board for displays, and special room arrangements allowing for grouping.

In 1961-62, I rearranged my Typing II class and included six separate units--one of which was a resource unit. This added a more practical application of typing and met with a great deal of approval from the students as well as the community. Their publication of the "History of Ridgway" was in great demand. I used a few typing films and introduced the use of rhythm records to improve typing ability and interest.

In 1962-63, I found that I was combining into one class students with no previous typing experience, ones who had had a short eighth grade typing course, and those who were ready to start Typing II. This presented a further problem of grouping and individualizing. I divided the class into three separate groups, but within those groups I still felt it was necessary to keep at approximately the same place. I incorporated all the helpful methods gathered from previous experiments, namely the use of the tape recorder, films, rhythm records, bulletin board and magnetic board displays, motivating devices, and the individual units which provided Typing II students with a course more related to an Office Practice course rather than Typing II.

Still not satisfied, I started working on my 1963 proposal. I am very grateful to the Project personnel for allowing me to continue in the same area. Through their guidance, the workshop consultants, the introduction of programed materials, and years of planning, I finally found something I feel really works.

PROCEDURE

Grouping. When the first class arrived, I determined the four main groups: those who had had Junior High Typing and were able to type 20 words a minute or more with accuracy (the Junior High Typing was a short course taught to some of the eighth grade students during the last period study hall. It met about twice a week); those who had had Junior High Typing but had poor accuracy or were unable to type 20 words a minute and could profit by taking some remedial work; those with no previous typing experience; and those taking the Typing II course. After determining the grouping of the students, I explained the general procedure. The beginning students stayed together for the presentation of the keyboard; then they proceeded at their individual rates through the rest of the course. The ones who were unable to type with a fair degree of accuracy and speed, even though they took the Junior High Typing, were also started at the beginning and really welcomed the opportunity to reconstruct their typing skills. The other Typing I students reviewed the work taking approximately two lessons a period for the first two weeks before individualizing. The Typing II class stayed together for the first week or so in order to reconstruct their typing skill and then they were allowed to proceed individually.

Instruction Sheets. The first printed instructions given the students explained the general outline of the course and the procedure to be followed. Along with that the student received an explanation of the grading plan and the first unit instruction sheet. As each unit was completed, the instruction sheet, with the unit typing attached, was placed in a wire basket on my desk for grading. The student then selected the next unit from his folder in the open-topped file and proceeded immediately with his work. If the next page in his folder indicated that he should take a test before proceeding, he then called it to my attention; and I supervised the general knowledge test, production test, and the timings very carefully.

Considerable time went into the preparation of the seventy-two instruction sheets necessary to cover the Typing I and II material. The sheets were devised to allow the student to know the goals for that part and occasionally to allow him to set his individual goal. Using the instruction sheets in connection with the text, each student was able to proceed through the unit (approximately a week to a unit) at his own rate. After completing the unit, the jobs were attached to the instruction sheet, and it was used as the cover page on which the student recorded the points received for each job and commented in regard to his problems or made suggestions for improving the instructions. The keys to the study guides were also on the instruction sheets to enable the student to check his guides as he completed them. The Typing II study guide keys were printed on the guides in programed form, but the Typing I keys were not available to the students.

As a student completed a job, he indicated on it the number of points earned and placed it beside his typewriter. If time permitted, I passed among the students and either changed the number of points or approved his by placing my initials on the paper. When the completed unit was handed in, I did not have to recheck any of the papers I had initialed and the grading was simplified.

I am revising the instruction sheets after rechecking and finding some of my errors, as well as asking the students for their comments in regard to the clarity of instructions, length of the units, and general opinion of the unit.

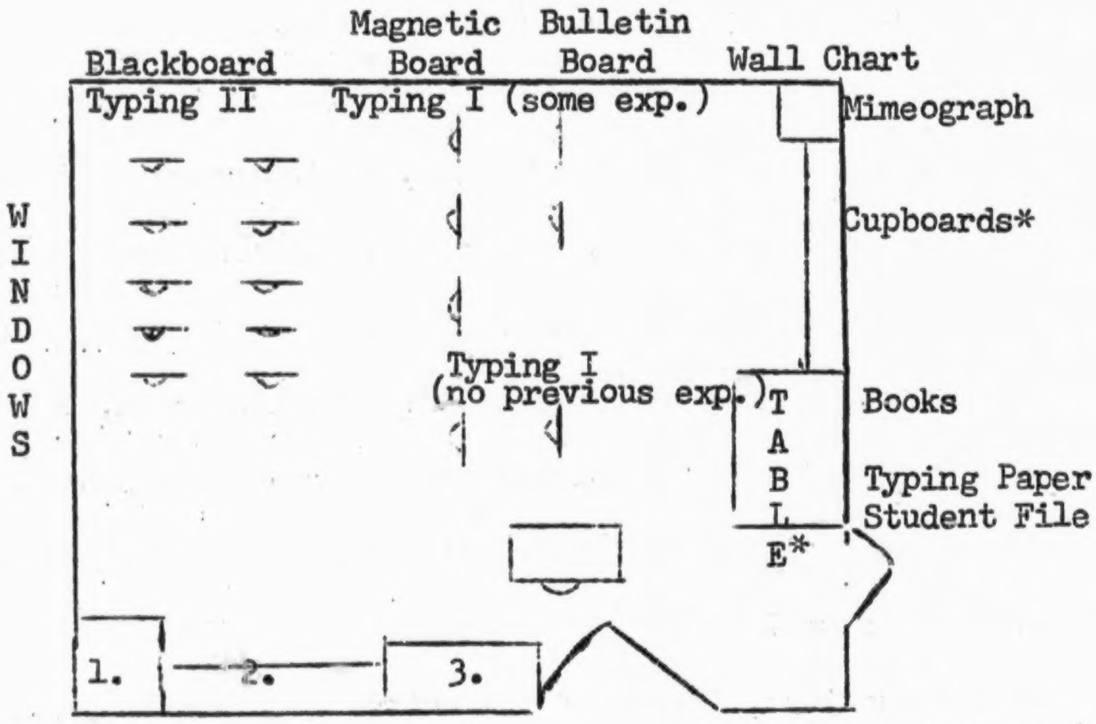
For both the Typing I and II classes I used the Gregg Typing text, 191 Series, and the instruction sheets were geared to that text. One might say it comes close to programing a textbook. As I continue to revise the instruction sheets, I believe the directions and progress can be continuous and self-explanatory.

A complete set of the instruction sheets is included with this documentation.

Room Arrangement. One thing I had learned from previous experiments was that the arrangement of the class was very important. In my 1963-64 class the ten Typing II students were arranged so that they were paired according to general progress and ability. There happened to be such a degree of difference among the seven Typing I students that pairing or grouping did not seem advisable. I did have this group facing a different direction so that I could speak to them without interrupting the other class. Those who had not had any previous typing were located close to my desk and to the equipment being used.

I might have used a different arrangement, but the typing room was used for several other classes and at the conclusion of each typing class the machines had to be moved from the desk and placed on the stands at the sides of the room. This is not a procedure I would recommend, but one that was necessary.

ROOM ARRANGEMENT


Magnetic Board
Bulletin Board
Blackboard
Wall Chart
Typing II
Typing I (some exp.)
Mimeograph
Cupboards*
WINDOWS
Typing I
(no previous exp.)
TABLE*
Books
Typing Paper
Student File
1.
2.
3.

1. Adding Machine
2. Cupboards*
3. Tape Recorder & Record Player

(*Typewriters placed here when not in use)

Timings. Those of you who are familiar with the teaching of typing or who have ever taken the course, realize that there was always a certain amount of waiting before all students were ready for a timed writing. Frankly, it was the fear of having one student ready for a one-minute timing, another needing a two-minute, five-minute, ten-minute, or even a thirty-minute production timing that made me reluctant to let the students proceed individually.

Last year I used the tape recorder for continuous timings. I recorded a tape on which I gave a starting signal, "ready" and then indicated each minute for an hour. For example with this tape a student taking a two-minute timing could start on "three" and stop typing on the word "five". I realized the students were really using the tape for their timings, for when I would happen to forget to start it, one of them would remind me immediately to turn on the recorder.

At our workshop in Vail, Dr. Lincoln Hanson, one of our consultants from the Center for Programed Instruction, suggested a simple electronic device that could be used for such timings which would have a different sounding signal every five minutes to facilitate the five-minute timed writings and a buzzing sound as a preparation signal. Because the students were responsible for starting and stopping at exactly the right time, I used the End-of-the-Part Tests to verify their timings. If there was too much discrepancy, I would administer several more timings to double check the accuracy of their timings. Of all the innovations I have had, this is the one that freed me from being a clock watcher. Now I feel I can be more of a "typist watcher".

Rhythm Records. Occasionally all students would take a break from the rigid schedule and relax with some music. I used the rhythm records[1] when the students were so engrossed in other activities that typing the regular jobs would be rather ineffective or when there were interruptions in the regular class routine. There were not many opportunities to use the records, but they were really appreciated when we did use them. I believe they have a definite place in improving speed through rhythm.

---

[1] Typewriting Rhythm Records, Accelerated Speed Series (Gregg Pub. Div., McGraw-Hill Book Co. Inc.)

Additional Units. For the student who completed the Typing I course in less than a year, I prepared special units on Alphabetic Indexing, Ten-Key Adding Machine, Mimeograph and Mimeoscope, and the Duplicator. The student could select one of these units or start the Typing II course.

Summary of Procedure. Timed writings were continuous and administered wholly by the students by using the continuous taped timings as well as the regular typing timer for the longer writings.

The instruction sheets provided additional information and enabled the student to continue from one unit to the next without interruption.

Grading was simplified by the students' recording the points earned on each job.

Students were encouraged to determine their own speed and accuracy goals.

The room was arranged as efficiently as facilities permitted.

Each student was allowed to progress at his own rate and to take additional units at the end of the Typing I course if time permitted.

All these changes gave me more time to assist students with individual problems, to check the work as it was typed and to correct technique faults immediately.

EVALUATION

Grading still presents one of my major problems. We are not a continuous progress school and, therefore, must require a specific amount of work in a definite time in order to receive credit in a course. The grading plan I have been using looks rather complicated, but it seems to be working all right. It establishes a point system for the quality of the work based on different quantities. There are four schedules: premium, regular, nominal, and failing. The highest number of points is given for a quality grade of "A" in the premium course, fewer points for an "A" in the regular course, etc. The failing course indicates not sufficient work being done for that grading period.

The suggested speed grade which applies to either straight timed writings or production copy as set up by the authors of our text is used to determine the grade to be given on the timings.

The End-of-Part-Tests (3 units) test general knowledge, production, and straight-copy speed and accuracy.

A copy of the grading plan may be found with the instruction sheets.

IMPROVEMENT

Last year when I was working out the seventy-two instruction sheets and making numerous changes in them before I felt they could be presented to the students, I was wondering if the old method would not be better--that of requiring every student to be on the same lesson. Once I let the students get started on an individual basis, there was no turning back or chance to pull them together. One very ambitious student was so enthused about the plan that she leaped way out in front of the rest and stayed there. Actually it was the thought of having her in the Typing I class that prompted me to work on this plan of individualizing. I also thought when I launched this project that I would have very small classes and that would be the year to get started. Eighteen is still a small class, but not when you want to get so much other work accomplished. This year my typing classes are small, so I am taking this opportunity to re-evaluate the instruction sheets, to spend some time equalizing the length of the units and to change some of the directions.

The students seemed to like individual progress. At the conclusion of the course, not one student felt he would rather have been taught by the old lock-step method but seemed to appreciate the freedom of progress.

My job is more interesting. I can spend much more time teaching since I'm not always starting timed writings. Students seem to be more industrious and all of the classroom activities are continuous and uninterrupted.

RESULTS

Production typing seems to be more important than straight-copy timed writings, but the timed writings are a more definite measurement so I used them in comparing students and classes.

In Typing I, I have been giving pre-tests and final tests for the past two years. In order to establish a speed grade, three tests must be submitted at any one speed. The error cut-off for the Typing I pre-test was 5 errors and for the final test 3. For Typing II the pre-test error cut-off was 3 and the final test cut-off was 1. The error cut-off is the number of errors allowed, and all words typed up to the next error beyond the allowable errors cannot be counted when figuring the speed.

The timed writings were based on either straight-copy or production work since in the Gregg text there is a word allowance for difficult production work so that it can be evaluated the same as straight copy.

The chart on the following page indicates the actual results obtained from three years of testing. Only in the last two years did I start giving the pre-test, but before that none of the Typing I students would have had any previous typing. The 1960-61 results as shown on the following "Analysis of Statistics" charts were kept only as averages and, therefore, they do not appear on the first "Statistics" chart. On the two pages indicated as "Analysis of Statistics", I have averaged some of the results in order to make comparisons. There is a separate analysis for Typing I and II. I have attempted to interpret some of the findings and to give you some possible reasons not reflected in the statistics.

STATISTICS

STUDENT	SEX	I. Q.	GRADE LEVEL	1961 - 1962				1962 - 1963				1963- 1964			
				TYPING I		TYPING II		TYPING I		TYPING II		TYPING I		TYPING II	
				Beginning Speed	Ending Speed	Beginning Speed	End. Speed	Beg. Speed	End. Speed	Beg. Speed	End. Speed	Beg. Speed	End. Speed	Beg. Speed	End. Speed
1	M	122	12	0	50										
2	M	100	10	0	36	...	...	...	...	--	41				
3	F	99	10	0	37	...	...	...	...	--	43				
4	F	115	10	0	38										
5	F	115	10	0	35	...	...	...	...	--	47				
6	M	104	10	0	42	...	...	...	...	...	...	...	...	24	51
7	F	98	10	0	31	...	...	...	...	...	...	...	...	20	43
8	M	117	12	0	36										
9	M	109	10	0	31	...	...	...	...	--	46				
10	F	102	12	...	...	--	51								
11	M	117	11	...	...	--	59								
12	F	106	12	...	...	--	50								
13	F	96	12	...	...	--	49								
14	M	104	11	...	...	...	...	0	40	...	...	...	...	32	64
15	F	95	10	...	...	...	...	20	38	...	...	...	...	28	53
16	F	102	10	...	...	...	...	22	44	...	...	...	...	36	55
17	F	91	10	...	...	...	...	0	30	...	...	...	...	20	44
18	M	101	11	...	...	...	...	0	31	...	...	...	...	26	45
19	F	106	10	...	...	...	...	26	49	...	...	...	...	38	55
20	F	119	10	...	...	...	...	24	47	...	...	...	...	42	53
21	F	98	10	...	...	...	...	20	45						
22	M	99	11	...	...	...	...	0	32						
23	M	103	11	...	...	...	...	0	31						
24	M	103	10	...	...	...	...	17	37						
25	M	90	11	...	...	...	...	0	34						
26	M	120	11	...	...	...	...	0	45						
27	M	95	10	...	...	...	...	0	30						
28	M	94	11	...	...	...	...	0	35						
29	F	109	11	...	...	...	...	...	...	...	...	0	31		
31	M	111	10	...	...	...	...	...	...	...	...	30	47		
32	F	103	10	...	...	...	...	...	...	...	...	33	50		
33	F	112	10	...	...	...	...	...	...	...	...	34	68		
34	M	104	10	...	...	...	...	...	...	...	...	30	53		
35	F	113	10	...	...	...	...	...	...	...	...	44	56		
38	F	--	12	...	...	...	...	...	...	...	...	...	...	35	49

ANALYSIS OF STATISTICS

TYPING I

	1960-1961	1961-1962	1962-1963	1963-1964	TOTALS
Number Tested	12	9	15	6	42
Average I.Q.	104	109	101	109	106
Average Speed	44	37	38	51	43
Highest Speed	50	50	49	68	68
Lowest Speed	34	31	30	31	30
Number with Jr. High Typing	0	0	6	5	11
Average Pre-test Score	--	--	22	34	28
Average Ending Speed of Those with Jr. High Typing	--	--	43	55	49
Average Ending Speed of Those Without Jr. High Typing	44	37	34	31	37

	BOYS - GIRLS		BOYS-GIRLS		BOYS-GIRLS		BOYS-GIRLS		TOTALS BOYS-GIRLS	
Number	8	4	5	4	9	6	2	4	24	18
Average I.Q.	--	--	110	107	101	102	108	109	106	106
Average Speed			39	35	35	42	50	51	41	43
Highest Speed			50	38	45	49	53	68	53	68
Lowest Speed			31	31	30	30	47	31	30	30

ANALYSIS OF STATISTICS

TYPING II

	1960-1961	1961-1962	1962-1963	1963-1964	TOTALS
Number Tested	5	4	4	10	23
Average I.Q.	97	105	106	102	103
Average Speed	52	52	44	51	50
Highest Speed	--	59	47	64	64
Lowest Speed	--	49	41	43	41
Average Speed--End of Typing I Course	--	--	35	39	37
Average Pre-test Speed	--	--	--	30	30
Average Speed of those with Jr. High Typing	--	--	--	54	54
Average Speed without Jr. High Typing	52	52	44	49	49

	1960-1961		1961-1962		1962-1963		1963-1964		TOTALS	
	BOYS	GIRLS	BOYS	GIRLS	BOYS	GIRLS	BOYS	GIRLS	BOYS	GIRLS
Number	3	2	1	3	2	2	3	7	9	14
Average I.Q.			117	101	105	107	103	102	108	103
Average Speed			59	50	44	45	53	50	51	48
Highest Speed			59	51	46	47	64	55	64	55
Lowest Speed				49	41	43	45	43	41	43

INTERPRETATION OF STATISTICS

RESULTS	POSSIBLE REASONS
The 1963-64 Typing I class excelled in achievement over all others tested.	This class has been outstanding all through the years. They received the completely individualized instruction about which I am very enthusiastic.
The highest speed was attained from a member of the Typing I class 1963-64.	This was an outstanding student and individual progress allowed her to proceed and not become bored by a pace that was too slow.
The students who had had the Junior High Typing outscored the others turning in an average speed of 49 words as compared with 37 for the others.	It seems there might be a definite value in teaching the keyboard to the Junior High students.
According to the statistics, sex does not seem to have any special relationship to excellence or failure in typing.	Contrary to my general opinion, the boys do have a very slight edge.
The 1962-63 Typing II class was much lower than the others in average speed.	The main emphasis was on the Office Practice units rather than on the typing units.
In Typing II the students who had had Junior High typing reached 54 words a minute as compared with 49 words for the others.	
From the statistics there is no direct relationship between typing speed and I.Q.	Too close to an average group without the very high or low students for comparison purposes.

FUTURE RESEARCH

This year I plan to use the Gregg Typing Records[1] to present the keyboard to new students and facilitate the review for students needing extensive reviewing. I have been using the records for a few days now, and I think the repetition of each letter and line with the tempo of the music being increased is excellent. For those students with a real sense of rhythm, it seems to be very stimulating. I believe I will have more opportunity to observe the individual faults of students, and I hope to be able to correct them quickly to avoid the formation of wrong techniques. So far the learning has been fun, and I am particularly enthused about the new method of presentation. The Typing I students who are already familiar with the keyboard are going through the records quickly as a matter of review.

I still have a lot of work to do on my present project, and I will be continuing my research.

Actually what I have in mind right now, even though it is not a part of the proposal I submitted, is to ungrade the business curriculum. One of our Vail workshop consultants, Dr. Rollins, did not encourage me to attempt such a project, but I'm not sure I made it clear to him that I generally handle all the business curriculum. I'm not sure how I will proceed, but I believe the work I have done so far is a step toward that goal.

The carry-over value of a project such as this reflects in many other areas. For example, I now have my entire bookkeeping class progressing at individual rates and find it is working out satisfactorily. The study guide tests and the unit tests, as well as the projects and practice sets, will serve as definite measurements and will assist me in determining individual difficulities or misunderstandings as well as providing a method of evaluation.

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1. Gregg Typing Records, Keyboard Drills and Exercises (Gregg Publishing Div., McGraw Hill Book Co., Inc.)

In order to provide a more adequate training for the students who do intend to follow up with their secretarial work, we added to our curriculum an extra course for the shorthand students who had had the first year of shorthand in their junior year but would not have any follow-up course in their senior year. The lack of a follow-up course was due in part to the heavy load already required of this group. The mathematics teacher, who is also qualified to teach commercial subjects, taught the Shorthand I course last year. This year she gives dictation to the girls interested in secretarial work twice a week at which time we exchange classes, and I teach the eighth grade typing. The other three days the secretarial girls report to the commercial room and work on the school annual, the newspaper, or take dictation or office instruction. All news items collected for the newspaper must be taken down in shorthand which provides additional dictation. We hope that this course will enable these girls to retain and improve their shorthand and typing speed and better prepare them for the future.

VT 005 597

Comparative Study of High School Graduates from 1-Year, Full Day and 2-Year, Half Day Vocational Programs in Suffolk County, N.Y.; A Review of Problems and Results of an Area School Innovative Program 1965-67.

New York State Education Dept., Albany. Bureau of Occupational Education Research
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 67 43p.

*TRADE AND INDUSTRIAL EDUCATION; *SCHEDULING; *PROGRAM EVALUATION; COMPARATIVE ANALYSIS; *TIME BLOCKS; COURSE ORGANIZATION; HIGH SCHOOL GRADUATES; HIGH SCHOOLS; AUTO MECHANICS (OCCUPATION); COSMETOLOGISTS; *VOCATIONAL FOLLOWUP; GRADUATE SURVEYS; PART TIME STUDENTS; HIGH SCHOOL STUDENTS; PROGRAM ATTITUDES SUFFOLK COUNTY; NEW YORK

To determine if graduates of vocational education programs who enrolled for a full-time basis for 1 year differed from students enrolled on a half-time basis for 2 years, a study was conducted involving 66 full-time students and 76 half-time vocational students in auto mechanics and cosmetology. Conclusions were: (1) There were no observable differences between the two groups which could be attributable to any particular instructional program, (2) Employer evaluations showed little distinction between the two groups in their mastery of vocational content theory or manipulative skills, (3) Girls in the 2-year, half-day program were considerably less satisfied with their schedule than any of the other groups, (4) A substantially large number of respondents traveling between schools reported dissatisfaction with home-school communications, bus travel, and not being informed of home-school activities, (5) A very low percentage of the students from the two districts applied for any post secondary education, (6) Job satisfaction was relatively high in both groups, and (7) Neither program demonstrated a significant superiority in terms of the factors investigated. (DM)

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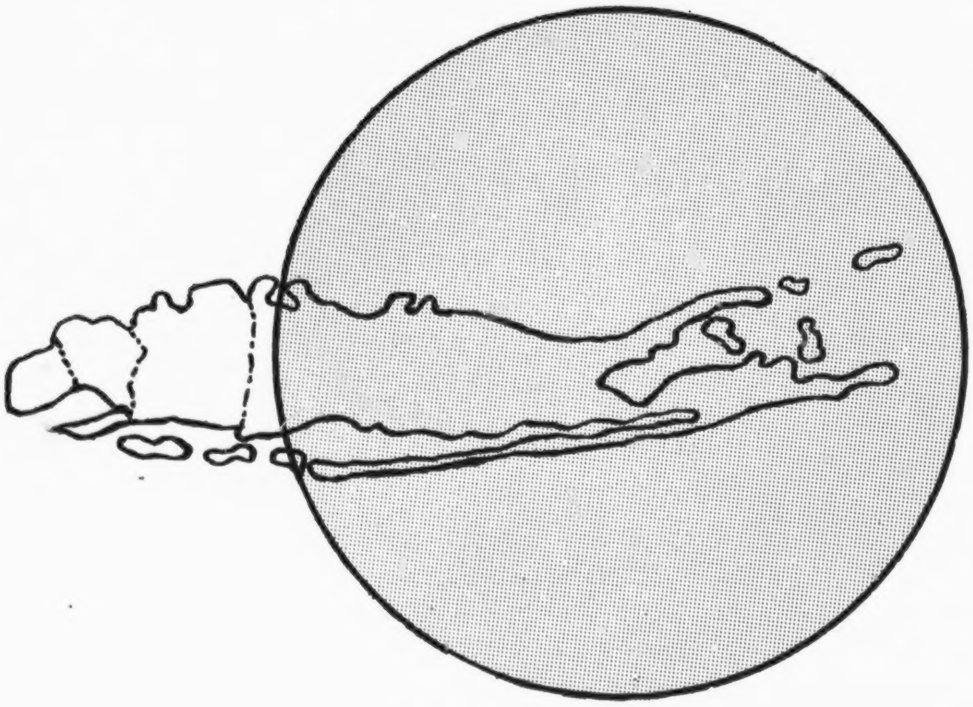
A COMPARATIVE STUDY OF HIGH SCHOOL GRADUATES FROM 1—YEAR, FULL DAY AND 2—YEAR, HALF DAY VOCATIONAL PROGRAMS IN SUFFOLK COUNTY, N.Y.

A Review of Problems and Results of an
Area School Innovative Program
1965-67



The University of the State of New York
THE STATE EDUCATION DEPARTMENT
Bureau of Occupational Education Research

VT005597

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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FOREWORD

This report presents a broad perspective of the problems which administrators and school personnel may encounter in establishing pilot programs of the type discussed. The major portion is concerned with the effects of different instructional patterns (related to scheduling) in vocational education on students, instructors, counselors, and administrators. It is an initial step in what is hoped will be a continuing process of examining and evaluating current practices which will lead to new approaches and fresh ideas in future program development.

The study was carried out under the auspices of the Bureau of Occupational Education Research and was initiated and supervised during its field operation by Alan G. Robertson, who was Chief of the Bureau. The field work was carried out during the summer of 1967 by Edmund Musteikis, who had served as Vocational Counselor and Job Placement Coordinator in Plainedge High School, Massapequa, New York, and who is currently Guidance Coordinator in the Winchester, Massachusetts Public Schools. The task of compiling, interpreting, and organizing the data was assigned to Leonard Powell, a Bureau staff member.

The Department is extremely grateful to Superintendents Harry Ward and William Phelan and their staffs in the Suffolk County Supervisory Districts 1 and 2 for the cooperation extended while this study was being conducted.

Although there are inherent weaknesses in a study of this type, it was conducted with the hope that it would serve as a catalyst in stimulating the development of reliable techniques for future field study research.

Carl E. Wedekind

Carl E. Wedekind
Director, Division of Research
New York State Education Department

THE UNIVERSITY OF THE STATE OF NEW YORK

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INTRODUCTION

Since 1917, Secondary Trade and Industrial Education in New York State has generally followed a pattern of instruction in which students receive trade and related education for 3 hours a day in a 2- or 3-year sequence. Reimbursement patterns mandated by the Smith-Hughes (1917) and George-Barden (1946) Acts required an instructional pattern of this type in order to make local programs eligible for a share of State-administered Federal money. With the passage of the Federal Vocational Education Act (1963) and the acceptance of the New York State Plan for its implementation, the old patterns of instruction were no longer required to insure reimbursement.

In spite of the fact that operating programs in secondary trade and industrial education no longer receive direct program reimbursement from Smith-Hughes and George-Barden Acts funds there has not been a general proliferation of new patterns of instruction. Primarily, the 3-hour or half day pattern in area school programs and in vocational and comprehensive high schools continuesto operate to facilitate administrative scheduling of classes. Since the normal school day ranges from 6 to 7 hours and State mandated "constant" subjects usually require half that time, it enables the administrator to provide for two classes to use the same facilities on a half day basis. By doing this, the administrator doubles the potential of his trade and industrial education plant facilities.

However, beginning with the 1965-66 academic year, the Board of Cooperative Educational Services of Suffolk County's Supervisory District 2 in cooperation with Suffolk County's Supervisory District 1 commenced a pilot program which established a new administrative pattern for vocational instruction.

In 1962, a study report on vocational trade and technical education in Suffolk County had recommended that a vocational program be set up to serve the high schools in the county's first Supervisory District. However, because of certain geographic conditions, it was decided that the traditional half day pattern would not be feasible. The major obstacle presented by the existing geography concerned the distance between schools in District 1 and the resulting costs and time involved in busing students to an area center on a half day basis for 2 years. District 1 covers the extreme eastern end of Long Island, extending some 40 miles from Riverhead to Montauk Point. The Island splits at Riverhead into two narrow forks, separated by the Great Peconic Bay. These conditions, coupled with the district's small population and school enrollment, negated the possibility of establishing an area center for a trade and industrial program to be run on a 2-year, half day basis.

A new scheme was designed in order to provide District 1 students the opportunity to participate in a vocational education program which was not available to them in their own district and/or where the prospects of developing the necessary facilities were not immediate.

A plan was formulated whereby potential vocational students in District 1 would complete all their academic requirements in 3 years in their home schools, and then devote their entire senior year to the study of a vocational subject at an area center located in District 2 in Western Suffolk County. The typical program for the first 3 years in the home school was as follows:

Ninth Year	Tenth Year	Eleventh Year
English 9	English 10	English 11
Social Studies 9	World History	English Electives or English 12
General Science	Electives	American History
Mathematics		Health 1½
Electives		Electives 1½

With credit received for all of the State mandated constants, a student would be able to spend the 12th grade in full time vocational study. It was estimated that this program would considerably reduce the cost and time required to transport students by halving the number of round trips to the vocational center.

Facilities for automotive mechanics and cosmetology programs were established in a modern building in District 2 for the use of District 1 students. The selection of these two programs was made by a consensus of District 1 principals. Two instructors were selected who had been teachers in a regular 2-year vocational program in District 2.

While the program was established primarily to provide vocational opportunities to students in a district where such training was not available, it allowed an excellent opportunity to study the effects of a unique organizational pattern on student attitudes, achievement level, job placement rate, and postsecondary educational pattern. A study was planned in early 1967 by the Bureau of Occupational Education Research for the purpose of determining any differences between the graduates of the 1-year program and the graduates of the traditional 3-hour a day, 2-year program. Initial meetings with administrators from both districts established the framework for such a project.

PURPOSE AND OBJECTIVES

The project was designed to determine if the graduates of the two programs differed in regard to certain selected factors and, if so, whether the differences could be attributed to the program itself. On the supposition that there would be no difference between the groups, the following assumptions were tested:

1. There would be no observable difference in the level of trade competency reached between the students in the full year program and the students in the regular half day program.
2. There would be no observable difference between the two groups in their mastery of vocational content theory or manipulative skills.
3. There would be no observable difference in receptiveness to instruction or satisfaction with daily school schedule between either of the groups.
4. There would be no measurable difference in obtaining entry occupations in the trade or related trade areas.
5. There would be no observable difference in the amount of postsecondary education obtained or applied for by the graduates in the same trade areas of both programs.
6. There would be no observable difference in the degree of job satisfaction between the two groups.

In addition to testing these assumptions, it was anticipated that the investigation would reveal attitudes and feelings on the following two questions:

1. What other outcomes could be identified by students, teachers, administrators, or employers as they perceived the effects of the experimental program?
2. What recommendations would the administrative, instructional, and guidance staff make if the experimental program were to be established in another geographic area?

LIMITATIONS OF STUDY

1. Because of the necessity of administering questionnaires to administrators, counselors, and teachers before they began their summer vacations, it was not possible to validate each questionnaire item nor was it possible to field test the questionnaires to check for their reliability. Because of this limitation, it was necessary to delete certain questionnaire items after the field work had been completed. The decision to eliminate an item was made after examination indicated that it had been misinterpreted or constructed in such a way that the resulting responses were misleading.
2. The samples involved in the study were only representative of their respective populations. Therefore, the results of the study are not necessarily generalizable to other vocational programs in New York State or elsewhere. However, the results may hold significance for other programs operating under conditions similar to those in the experiment and in areas where employment opportunities are comparable.
3. No standardized tests, other than the New York State Comprehensive Examination, were administered to students to measure such factors as job competency, manual dexterity, or knowledge of content theory. All data pertaining to this kind of evaluation were obtained, with the exception of the Statewide examination which measures knowledge of content theory, through interviews with instructors or employers. Aside from data which may be lent to statistical analysis, it was acknowledged that the findings of this study would be highly subjective.

METHODOLOGY

Sample

A nonrandom sampling technique was used. The student sample involved the 1966 and 1967 graduates of the 1- and 2-year programs. For the remainder of this report, those students in the experimental all day vocational program will be referred to as the District 1 students. District 2 students refers to the sample of students who began the vocational program in the junior year and continued on a basis of a half day of vocational instruction and a half day of academic instruction for 2 years.

Both District 1 and 2 students graduated in the same years, namely June 1966 and 1967. There was a total of 38 boys and 40 girls in District 1. District 2 graduates in the 2-year program totaled 67 boys and 141 girls. The entire population of students from the experimental 1-year program in District 1 was chosen for the survey. It was intended initially to match the student population of District 1 with students from District 2. Matches were to be made on the basis of IQ scores, Differential Aptitude Test scores, and New York State Comprehensive Examination scores in auto mechanics or cosmetology. However, when attempts were made to effect these matches a host of difficulties arose. It was discovered that there was little uniformity in the type of IQ test administered. IQ scores were, in most cases, derived from the Otis IQ Test in both districts. However, a large number of 1966 and 1967 graduates had scores based on the California Test of Mental Maturity or the Lorge-Thorndike Test. Furthermore, there was little uniformity concerning the grade in which the test was administered, and in some cases no IQ score was ever recorded. In addition, a close examination of student records indicated that a certain number of students had not taken the New York State Comprehensive Exams. This was highly significant since it eliminated the only available uniform benchmark for measuring achievement. It was further found that a great deal of variation existed in the administration of the Differential Aptitude Test. Some schools did not administer the test; some only gave certain parts, in many instances excluding the spatial relations and mechanical reasoning sections.

A final obstacle was encountered when attempts were made to contact potential subjects. Many of the students representing one-half of the potential matched pairs could not be located to arrange for a questionnaire interview.

After considerable deliberation it was decided to discard the matched pairs procedure and draw a sample from the District 2 population of students for whom record information was available and whose general characteristics as a group most closely resembled those students of the District 1 population. One hundred fifty-nine such students were identified as possible sample choices. Of this number, 76 students, 38 boys and 38 girls, were interviewed and questioned by the field investigators.

Procedures

In order to obtain the attitude and opinion responses, it was necessary to devise questionnaires and interview guidelines for students, instructors, counselors, and administrators. To see if there would be any difference in the level of trade competency, mastery of vocational content theory, or manipulative skills a questionnaire was administered to the employers of those graduates holding jobs related to their vocational training. In addition, scores on the New York State Comprehensive Examinations in cosmetology and auto mechanics were compared for the purpose of determining any group differences. IQ scores were used as a base to establish comparability of groups. While the IQ scores were initially discarded as a basis for matching students (primarily because so many different examinations were used that a great variety of conversion tables would have to be used to obtain precise individual scores), it was felt that the IQ scores would be acceptable for the purpose of establishing general group similarities.

This decision was guided by the fact that there is a high positive correlation between the Otis, Lorge-Thorndike, and California Test of Mental Maturity (see below) and by the fact that on a composite basis group inconsistencies concerning the grade in which a test was administered would tend to cancel each other out.

Correlation of Lorge-Thorndike with California
Test of Mental Maturity and Otis*

Lorge-Thorndike	CTMM	Otis
Grade		
7	.79	.78
8	.78	.86
9		
10	.79	.84
11	.83	.84
12	.77	.86

* Technical Manual for Lorge-Thorndike Intelligence Tests, 1957, Houghton Mifflin Co., Boston.

To test for differences in student receptiveness to instruction, a questionnaire was designed for vocational instructors and counselors. Finally, to examine factors such as job placement, applications for postsecondary education, and degree of job satisfaction, two questionnaires were developed for the students. One form was developed for students in the armed services and another for those in civilian life. Parents were instructed to fill out questionnaires for those students who were not living at home even though it was realized that underlying student attitudes might not be revealed through the parent.

It was felt that opinions of administrators would be key factors in assessing the experimental program. Their recommendation and suggestions for future implementation of the experimental program were keenly sought since it is the administrator who is responsible for scheduling, budgeting, and often for the decision to institute a new program. To assess the administrator's position, an interview form was constructed which included a majority of subjective and free response questions. It was administered by an investigator who attempted to channel the administrators remarks so that comparative data on the two programs could be obtained.

The final questionnaire was a brief four-item instrument to measure parental attitudes and feelings concerning the program in which their son or daughter had been enrolled.

One of the foremost objectives of the survey was to determine the attitudes and feelings of the students regarding their daily program and schedule while in school as well as their level of job satisfaction after graduation. With this objective in mind, it was decided that questions which elicited free responses would reveal more enlightening information than those emanating from an objective, forced response type question.

Because of the number of free response questions and the relatively small number of individuals involved, the decision was made to have the questionnaire administered by field investigators. The need for descriptive and attitudinal data demanded a more flexible method for measuring responses than would be afforded by a mailed questionnaire. Field workers and the principal investigator were able to record the more subtle parental, student, and administrator attitudes which could not have been ascertained without personal contact. Training sessions were held for the field investigators by the Bureau Consultant and the Director of the Division of Education Evaluation, New York State Education Department.

Treatment of Data

As an initial step in treating the data, each questionnaire was edited for the purpose of discarding items that had been misinterpreted by respondents or were poorly constructed. In addition, deletions were made for contradictory and illegible responses.

Questionnaire data were treated in two ways. Results of the objective, forced response items were converted into percentages and represented by bar graphs. Any qualifying or clarifying remarks were inserted directly beneath the columns of the item in question. Responses to the open-ended questions were recorded and then summarized into various categories. It became necessary for the investigator to use discretion in deciding which comments were to be categorized. For example, students were asked to give their reaction to the daily schedule of their program. Several comments represented criticisms of instruction and curriculum. While these remarks might have relevance for instructors and school administrators it was felt that they fell beyond the scope of the survey, which was to determine whether there were any group contrasts or commonalities relevant to the assumptions being tested. Consequently, responses of this nature were discarded.

In addition to treatment of questionnaire data, it was decided to determine whether there were any differences in the scores received by the District 1 and District 2 females in the Statewide comprehensive exam in cosmetology and the District 1 and District 2 males in the Statewide exam in auto mechanics.

IQ scores were used to establish comparability of the groups. A t-test was utilized to measure for significant differences in the mean IQ of District 1 vs. District 2 males. Once it was established that there were no significant differences in the IQ level of the groups being compared, the same statistical technique was used to test the differences between means of the groups on the comprehensive exam.

ANALYSIS OF THE DATA

District 1 Questionnaire Returns

Sixty-six out of a possible 78 students were interviewed and completed questionnaires representing a return of 85 percent. For the 66 student respondents, 63 parent questionnaires were received constituting a return of 95 percent. Twenty-nine employer questionnaires were received for the 50 students who were employed full- or part-time, representing a 58 percent return. The two instructors in the experimental program were interviewed as were 15 school administrators and 12 guidance counselors. A sample was not established for instructors, counselors, or administrators, hence, no percentage figures to represent returns are available.

District 2 Questionnaire Returns

Seventy-six of the 159 students who were identified as comparable in general characteristics to their District 1 counterparts were interviewed and filled out questionnaires. Attempts were not made to contact the entire 159 students. When the field investigators had interviewed a number of students comparable to the number of those in District 1 they did not seek additional respondents. Seventy-six parent questionnaires were received, constituting a return of 100 percent. Thirty-two employer questionnaires were received for the 54 students who were employed, representing a 59 percent return.

All 6 vocational instructors were interviewed as were 10 administrators and 7 of the district counselors.

The findings of the investigation are presented in relation to the previously stated assumptions. Where applicable, figures will be used in conjunction with the commentary for the purposes of emphasis and clarification.

> Assumption 1. There would be no observable difference between the two groups in the level of trade competency or the degree of mastery of content theory and manipulative skill.

Male

The District 1 instructor, who had previously taught in the 2-year program in District 2, felt that the concentration provided by full-time vocational study enhanced the students acquisition of content theory. However, little relationship was seen between manipulative skill and pattern of instruction.

A minority of the District 2 auto mechanics instructors (2) believed that some general education courses, taken concurrently(especially math and science), provided information which could facilitate mastery of vocational content theory.

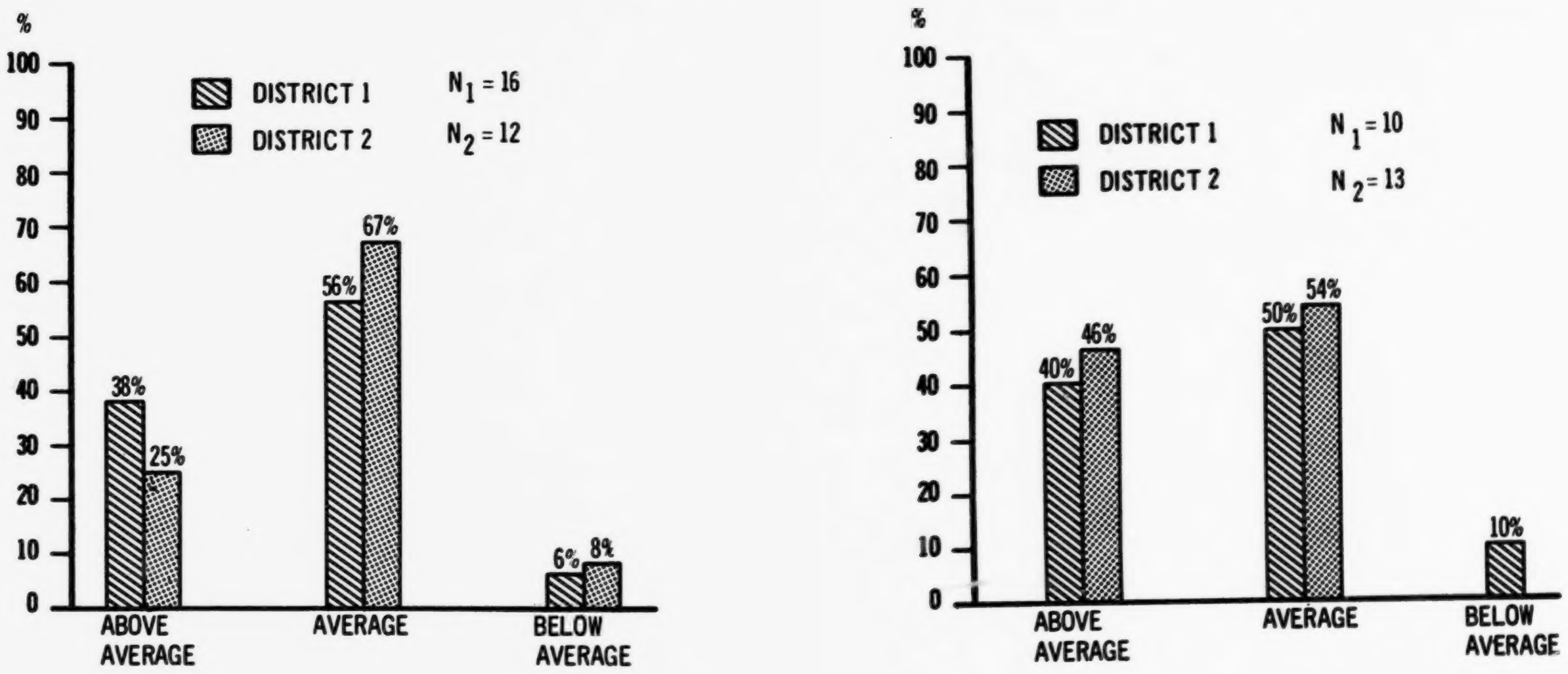
Female

The District 1 cosmetology instructor who had also taught previously in the 2-year program in District 2 felt that the completion of general education courses (biology in particular) before starting the year of vocational training enhanced the students ability to grasp content theory. Two of the cosmetology instructors in District 2 felt that taking some general education courses in conjunction with vocational training facilitated the mastery of content theory. They suggested that courses such as art, math,and biology should accompany vocational training.

In addition to instructor comments, a questionnaire administered to the employers revealed that, in general, little perceived difference existed between the two groups in the areas of manipulative skill and knowledge of related content theory. The one exception occurred in the rating of females on the latter factor, where employers indicated that 30 percent of the District 1 females were above average as opposed to only 9 percent of their District 2 counterparts who also had 9 percent of their group rated as being below average. (Refer to Figures 1 and 2.)

Figure 1

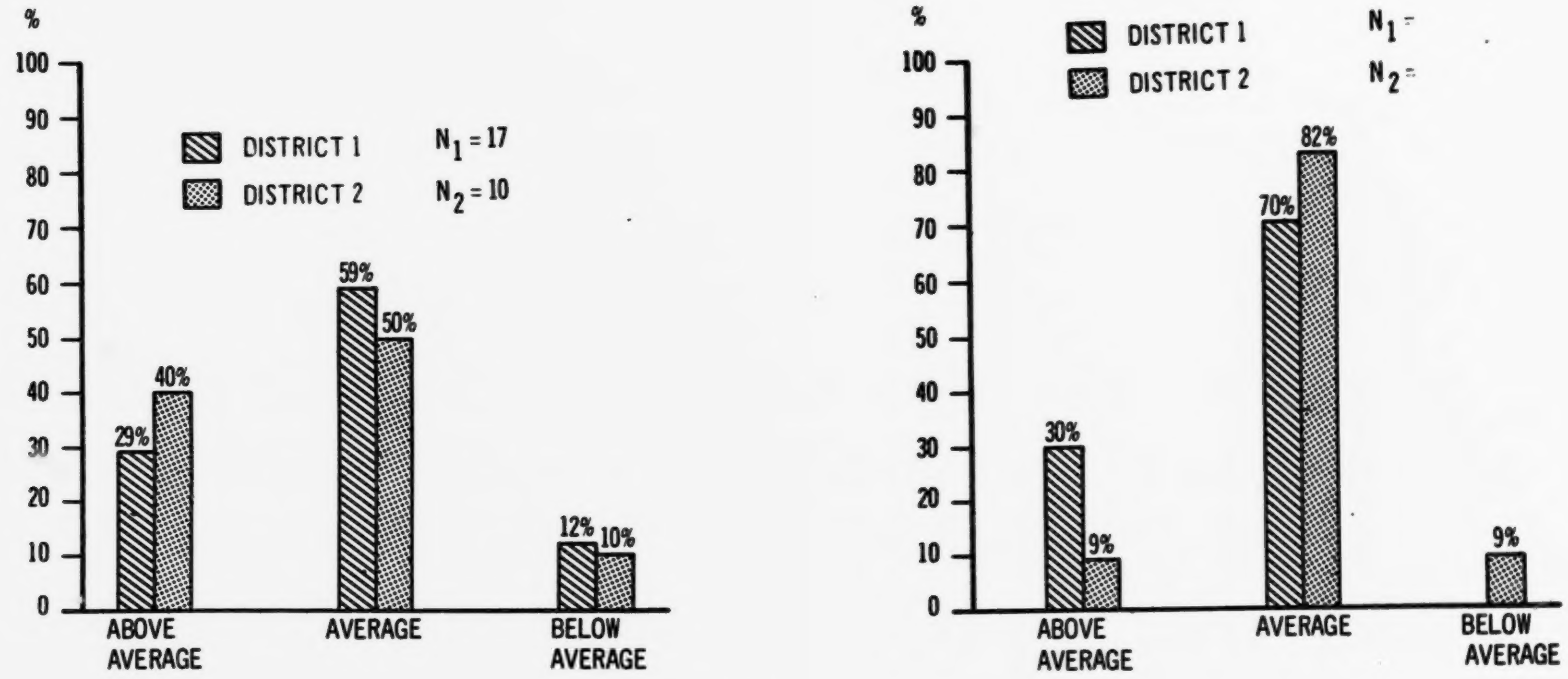
Employer Rating of Employee Manipulative Skill


Male

Female

Figure 2

Employer Rating of Employee Knowledge of Related Theory

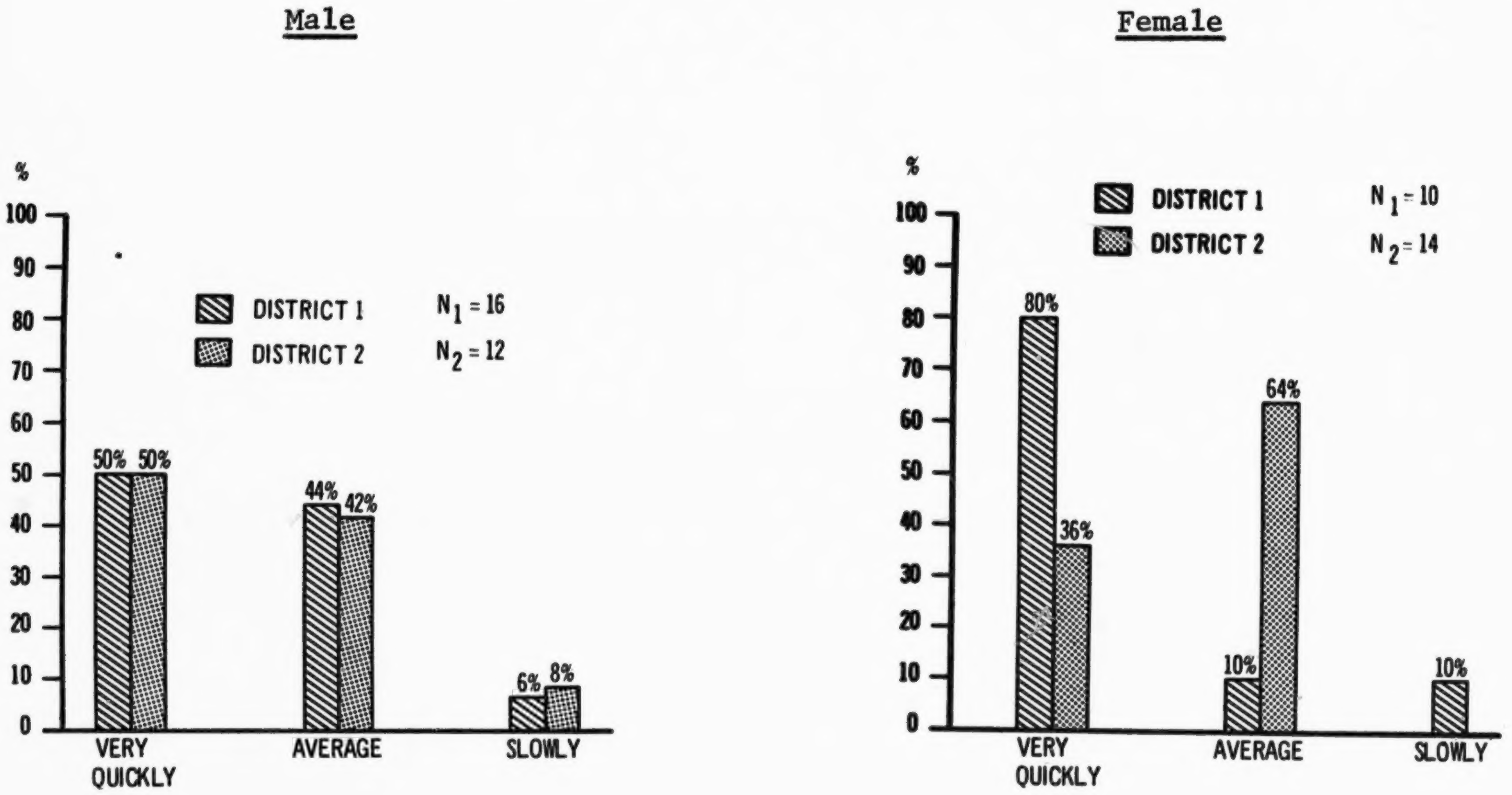

Male

Female

In addition, employers were asked to rate their employees on the amount of time it took to learn their job duties. The greatest difference occurred in the "very quickly" rating received by the District 1 and 2 females. Eighty percent of the District 1 girls were placed in this category as opposed to only 36 percent for the District 2 girls. (Refer to Figure 3.)

Figure 3

Employer Rating of Employee's Speed in Learning Job Duties



Comparison of Statewide Comprehensive Scores in Automechanics and Cosmetology

To establish group comparability, a t test was administered to determine if there were any significant differences between the mean IQ scores of the males in District 1 and the males in District 2 and the females in District 1 and the females in District 2.

Table 1

Males

Dist.	Mean	S.D.	t value	Sig level
1	100.867	9.680	.15638	None
2	100.474	11.0132		

Females

Dist.	Mean	S.D.	t value	Sig level
1	101.879	10.454	.381156	None
2	102.811	10.2628		

The computed t valves for both males and females indicated no significant difference of mean IQ between the two district groups.

On the basis of comparable IQ scores and the fact that both groups had completed courses of identical content, a t test was administered to determine if there were any significant differences between the groups on mean score achieved on the respective exams in auto mechanics and cosmetology.

Table 2

Males

Dist.	Mean	S.D.	t value	Sig level
1	68.5	10.7	3.93	.01 level
2	57.02	13.5		

Females

Dist.	Mean	S.D.	t value	Sig level
1	70.4	8.88857	0.63	None
2	71.8	9.2		

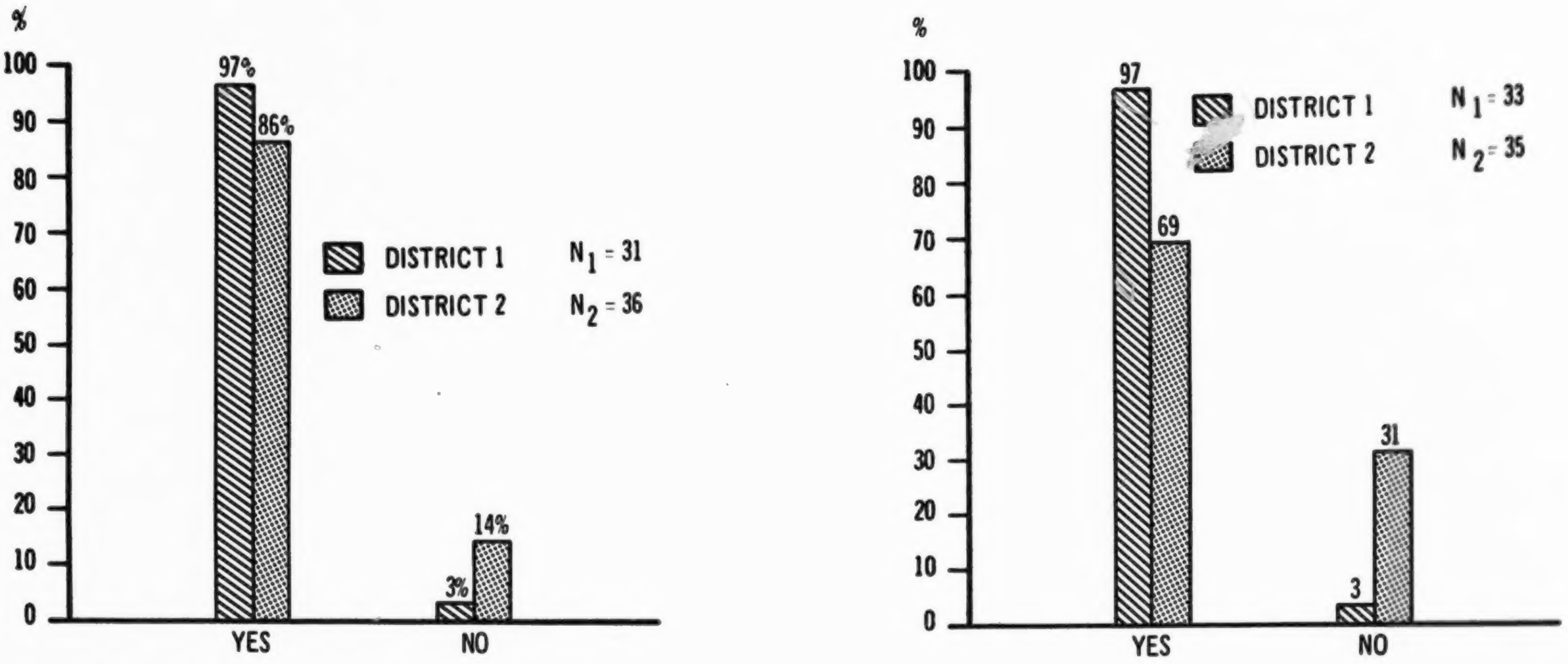
The District 1 males achieved a mean score on the auto mechanics exam which was some 10 points higher than their District 2 counterparts. The computed t value indicated a difference which was significant at less than the .01 level. There was no significant difference reported between the mean scores achieved by the District 1 and District 2 females on the Statewide comprehensive exam in cosmetology.

Assumption 2. There would be no observable differences in satisfaction with daily school schedule between either of the groups.

On the question of satisfaction with daily program schedule both groups responded overwhelmingly in the affirmative. (Refer to Figure 4.)

Figure 4

Students Response to Question on Satisfaction with Daily Program Schedule



Male

Female

In addition, students were asked to comment on any specific positive or negative aspects of their program.

Males

Twenty-six percent of the District 1 males voiced displeasure with the poor communications that had been maintained with the home school during the year and the fact that they had missed home school activities. Twenty-nine percent indicated that buses were uncomfortable or travel distances were too far.

A somewhat lower proportion of District 2 indicated annoyance with travel (13 percent) and separation from home school activities (11 percent).

Females

Fifty percent of the District 1 females reported they had been dissatisfied with the lack of communication between their home schools and the vocational center.

The District 2 females, who had recorded the lowest percentage of satisfaction with daily schedule (69 percent), indicated that they found bus travel a problem (34 percent) and did not like being separated from the home school (32 percent). Eighteen percent of the District 2 females indicated that the split day was very tiring.

Accounting for those students who had reported general program satisfaction yet identified certain negative aspects it is possible to interpolate from the percentages in Figure 4 those students who registered satisfaction with their program and reported no negative features. Seventy-one percent and 51 percent of the District 1 males and females respectively and 74 percent and 39 percent of the District 2 males and females respectively fell under this category.

The results of this questionnaire item indicate that while both groups had been generally satisfied with their daily program the females in the 2-year program identified to a greater degree the negative aspects of this program.

Assumption 3. There would be no observable difference in obtaining entry occupations in trade or related trade areas.

Males

In terms of the relationship between the student's current job and training received in high school, a somewhat higher percentage of District 1 males reported jobs directly related to their training than their District 2 counterparts.

It is noteworthy that four of the seven servicemen in District 1 were performing duties related to their vocational training as were seven of the eight servicemen from District 2. Somewhat over 30 percent of both groups were involved in jobs somewhat related to their training. The greatest contrast was in the nonrelated job category where only 10 percent of the District 1 males were involved as opposed to 24 percent of the District 2 males.

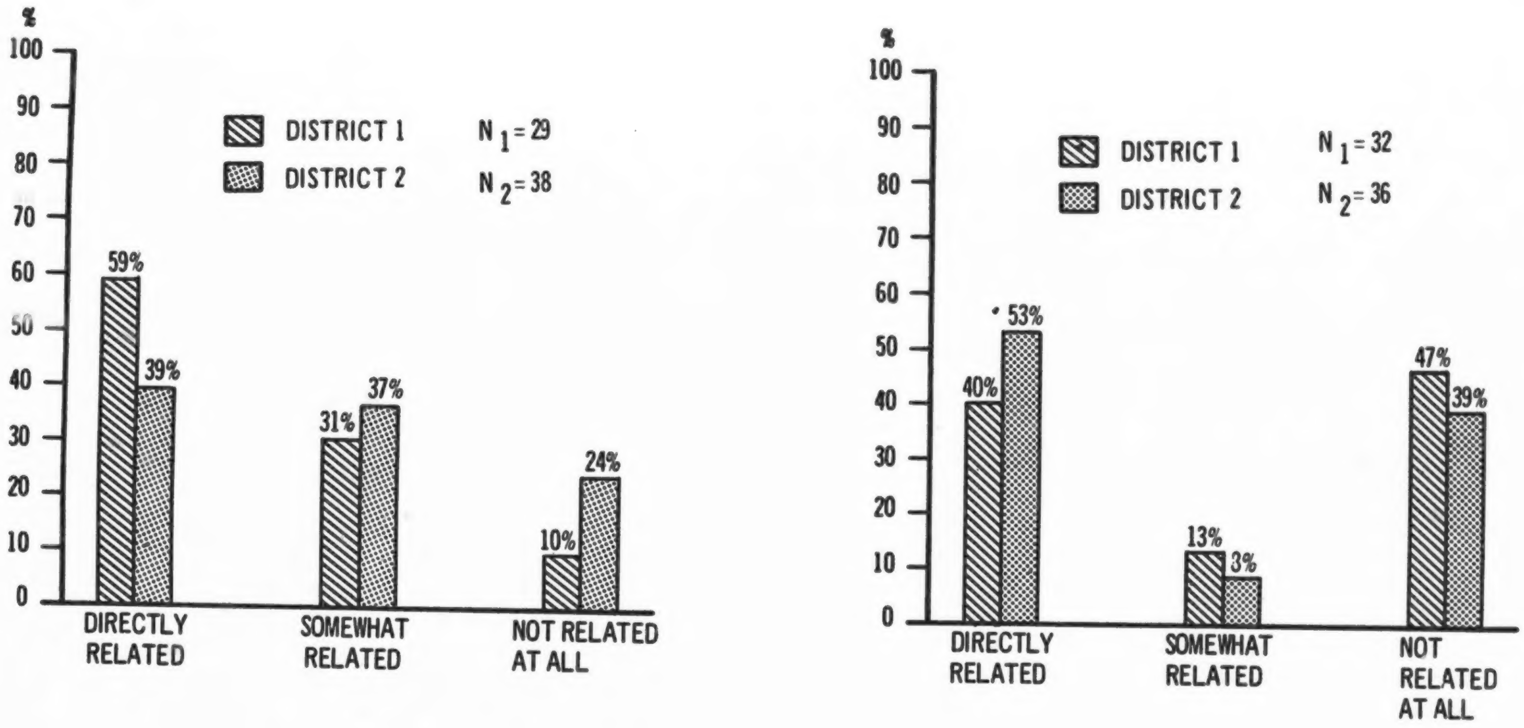
Females

Little contrast was observed in the job patterns of the females from both districts. It was interesting to note that 47 percent and 39 percent of the District 1 and District 2 females respectively were performing jobs unrelated to their vocational training. (Refer to Figure 5.)

The investigators were aware of the fact that the instructional program alone could not be responsible for the degree of relationship between the job and vocational training. Probably the greatest factor in securing jobs connected with auto mechanics or cosmetology was the economic area to which the student returned after graduation. The employment opportunities in the two districts were not comparable. Furthermore, certain important variables, such as the strength of student interest in a particular trade or skill, were not measured prior to the study.

Figure 5

Relationship of Student's Most Recent Job to Vocational Training Received in High School



Male

Female

Assumption 4. There would be no group differences in the amount of postsecondary education applied for or obtained.

Males

The overwhelming majority of males from both districts did not apply for any postsecondary education. In District 1, four of the total male respondents applied for advanced schooling. Of these four, one will attend a 2-year college, one completed a tractor trailer driving course, one had applied to the General Motors Technical Institute but had not been notified of acceptance, and one applied for a post high school technical institute and was rejected.

A higher percentage of District 2 males applied for postsecondary education (9 out of a possible 38). Five of the nine were accepted, three will attend advanced technical institutes, and two will be matriculated in 2-year colleges. Three students were awaiting notification from two technical institutes and a 2-year college and one student was not accepted at the 2-year college to which he applied.

Females

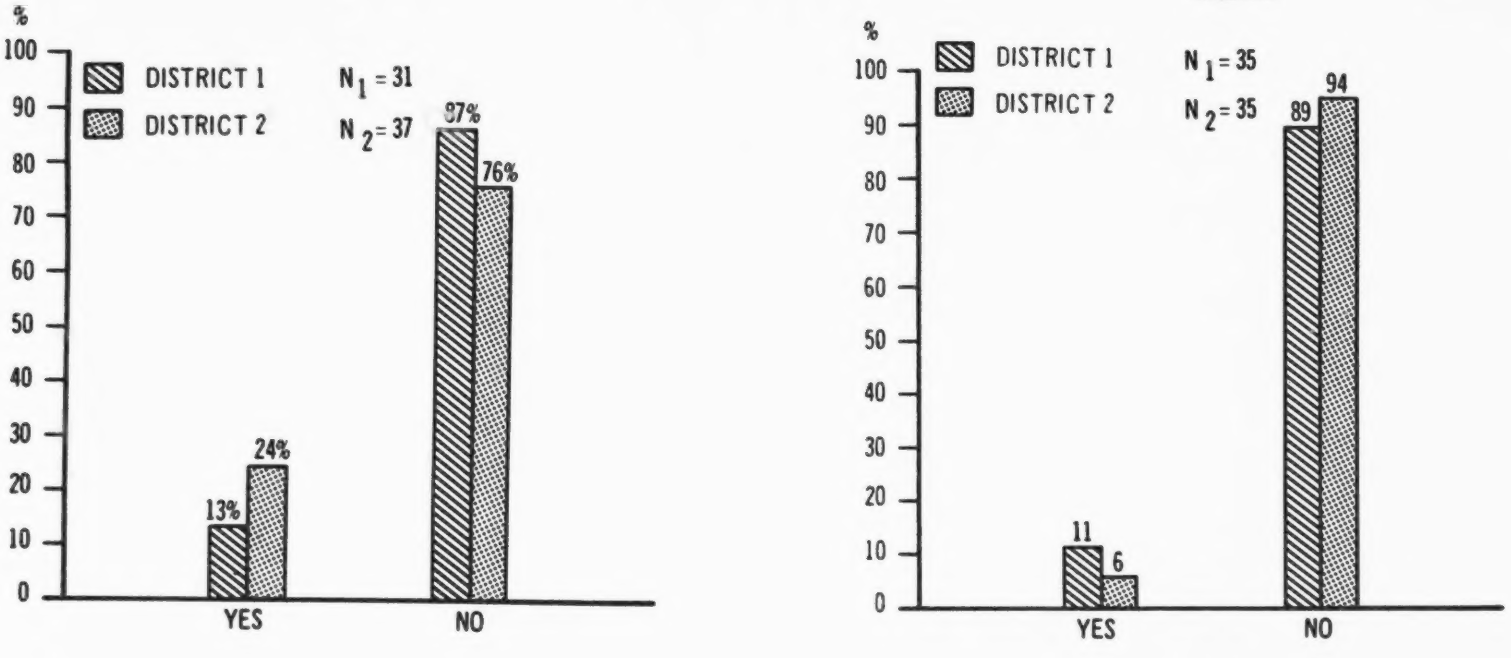
The percentage of postsecondary school application was even smaller among the females (11 percent and 6 percent for Districts 1 and 2 respectively).

All four of the District 1 females who had applied for advanced schooling had been accepted. One will attend a beautician specialization institute, one had completed barber's school, one had commercial training as an airline stewardess, and one will attend a school for pactical nursing.

Two females in District 2 applied for advanced training, one had been accepted in a 3-year program for visual arts and one was awaiting notification regarding her acceptance in a beauty school. (Refer to Figure 6.)

Figure 6

Students Responses to Question Concerning Application for Postsecondary Education



Male

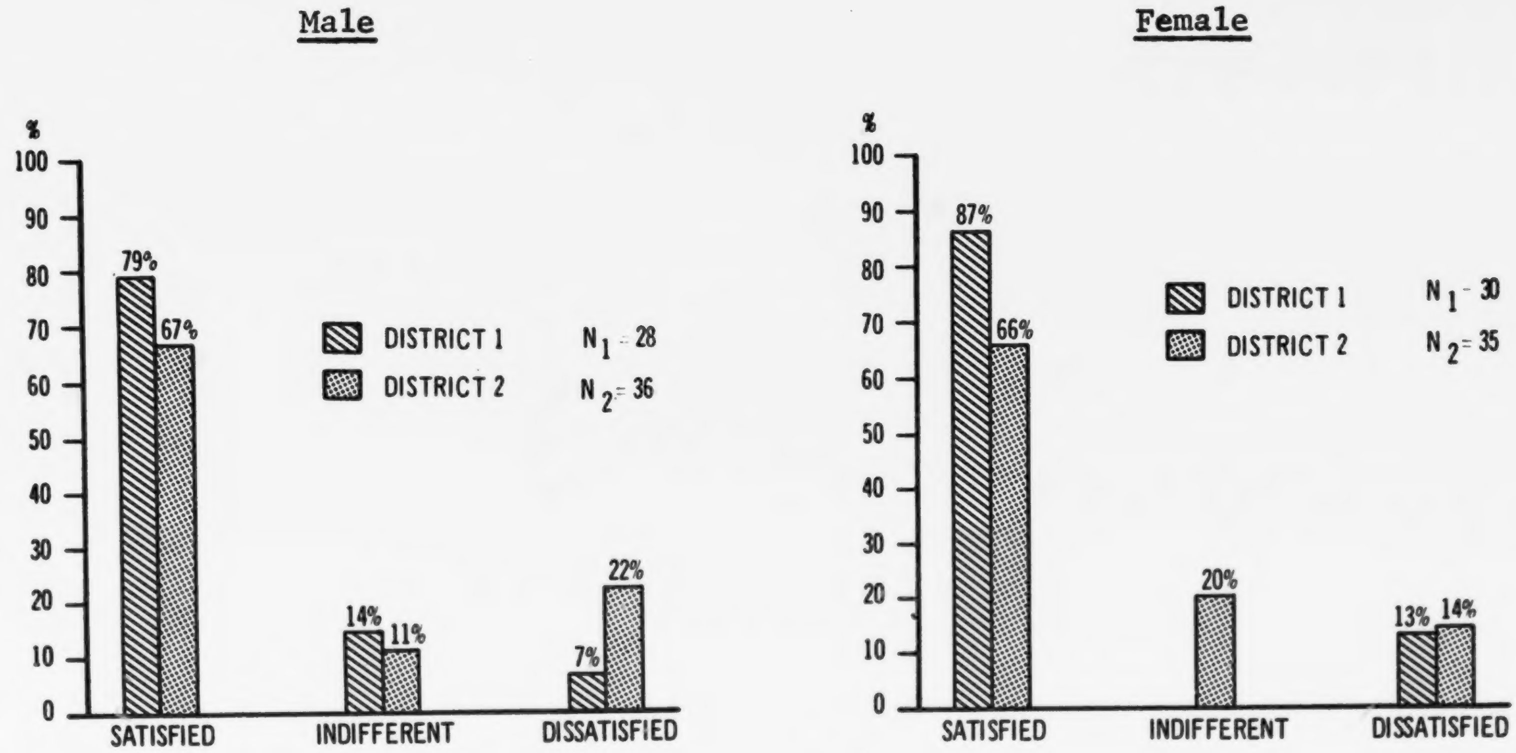
Female

Assumption$_5$ There would be no difference in the degree of job satisfaction between the two groups.

Questionnaire results indicated a high level of job satisfaction for males and females of both groups, although District 1 males and females reported a somewhat higher degree of satisfaction. (Refer to Figure 7.)

Figure 7

Feelings of Graduates Toward Their Present Job



In addition to gathering information to support or refute the basic assumptions, it was anticipated that additional questionnaire items and interview guidelines would reveal information concerning other outcomes of the program which would be valuable in the final assessment. In addition, general recommendations were sought from school administrators and the instructional staff for the use of those interested in establishing a vocational program in another geographic area.

Students

Male

In District 1, 6 percent of the males would have preferred a different vocational field.

Thirty-six percent of the males in District 2 stated that equipment could have been more plentiful and of better quality. Three students reported that theft of tools had taken place. Eighteen percent would have preferred programs in a different trade area.

Female

Fourteen percent of the District 1 females stated that they would have preferred different vocational fields, with the majority mentioning practical nursing as their choice. Other choices were available to the District 2 girls at the time they made their program selections.

Thirty-nine percent of the District 2 females stated that there should have been more concentration on hairstyling and coloring. Ten percent complained of the lack of practical work while two others claimed that the time allocated to application was not long enough.

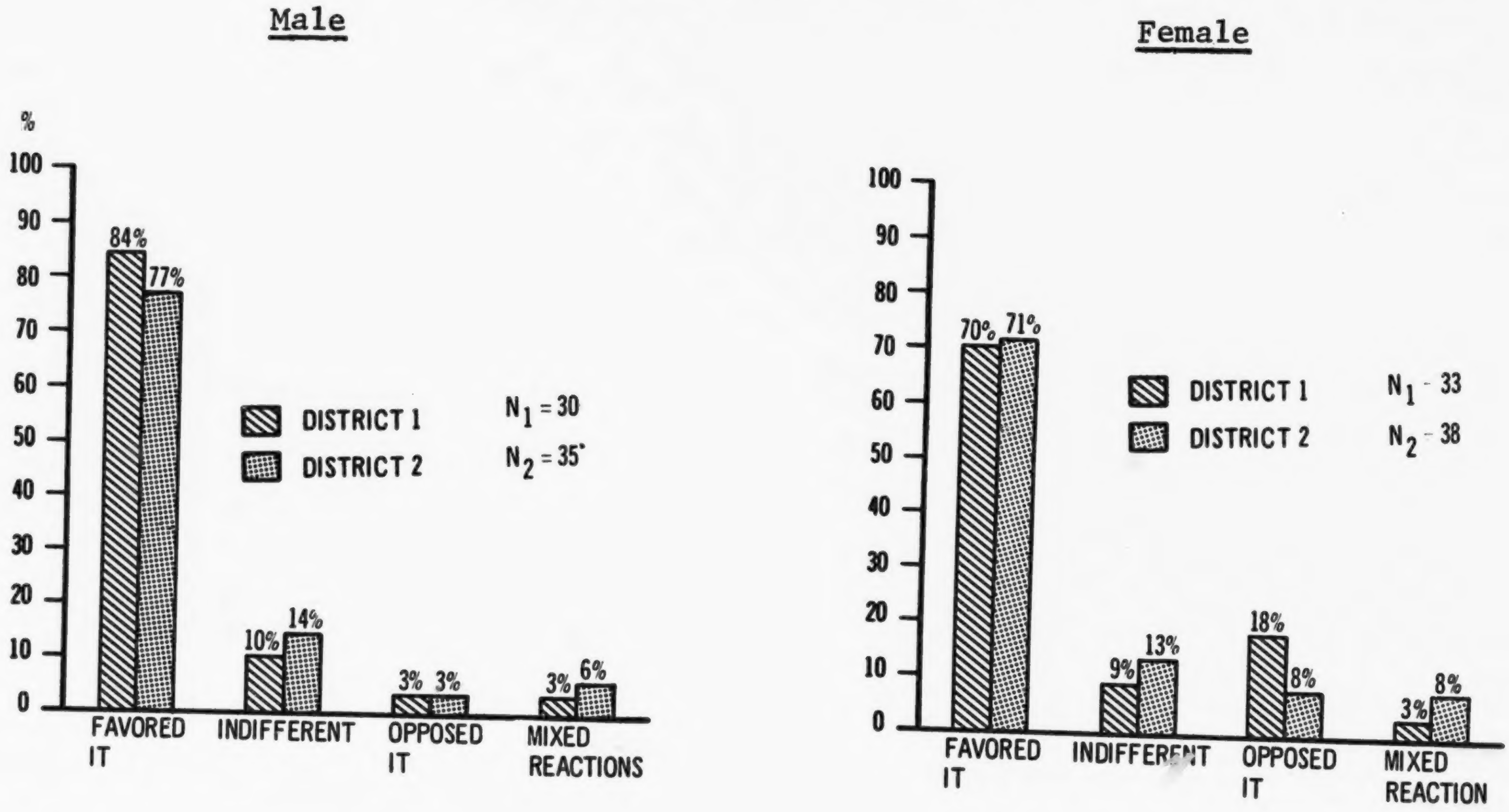
Parents

Parents were canvassed for their feelings toward the separation of their son or daughter from the home school.

In the majority of cases their remarks reflected the attitudes of their children. Generally, they approved of the program but voiced criticism of the lack of home school communication and travel difficulties. (Refer to Figure 8.)

Figure 8

Parents' Feelings Toward the Separation of their Son or Daughter from the Home School Community



Male

Female

Instructors

Instructors from both programs were asked their preference if given the choice of teaching their subject on a full or half day basis.

The District 1 instructors seemed to be fully committed to the one-year program. Some of the reasons given for their preference were as follows:

1. Assignments can be pursued in greater depth and followed through to completion on a full day basis.
2. The same lesson does not have to be taught twice a day.
3. Greater efficiency is realized in record keeping, shop cleanup, and student responsibility for equipment.
4. Different teachers for each of the half years in the 2-year program, each with different methods and techniques, might tend to confuse students and duplicate earlier work.

5. Three hours a day (2-year, half day program) is not sufficient time to have students work through practical assignments.

Three instructors from the 2-year, half day program (District 2) exhibited a preference for the 1-year program. The cosmetology instructors (2) stated that students would get more out of a continuous day as many experiences (hairstyling, long applications, etc.) are lengthy and should have more time than is afforded by the half day program. They also indicated that seniors are more receptive to instruction and are more serious about their work.

An auto mechanics instructor in District 2 explained that in a 1-year program, students would be able to remain with a lengthy assignment to completion. In the 2-year program, students often lose interest when starting an assignment knowing that time will run out and that there is little likelihood of continuing at the next class meeting.

Three instructors favored the 2-year program for the following reasons: (1) Having the program spread over a 2-year span facilitated recall and minimizes the amount of cramming, (2) The attention span of the students in a 1-year program would fade due to the amount of time spent in class, (3) Finding enough work to cover a 6- hour period would be a problem, and (4) All day contact with the instructor may result in familiarity which could undermine authority.

Instructors were asked if they thought students would favor a 1-year program in the 12th grade rather than the traditional 2-year, half day program.

The District 1 instructors thought students would prefer a 1-year program for the following reasons: (1) students prefer to be fully committed to a program without concern for outside demands, and (2) as there is no attendance at the home school, purchase and change of clothes is not a problem.

Three instructors in the 2-year program thought that students would prefer a 1-year program for the following reasons: (1) Students prefer the same instructor for a full day program, (2) Students want to be free of outside preparation and concern for other subjects, and (3) It is important for a student to be able to complete a job once he starts it.

One instructor did not think students would be inclined to enter a course requiring their presence for 6 hours.

As an alternative to completing the 2-year, half day program in grades 11 and 12, it was suggested to the instructors that students might effectively complete their vocational training in grades 10 and 11 and then return to their home school for a full day of general studies in grade 12.

The District 1 instructors did not feel a 2-year half day program could be offered effectively in the 10th grade. Some of the reasons given were as follows:

1. Low maturity level of students
2. Motivation would be lower because proximity to full employment is distant
3. Too much will have been forgotten by the time grade 12 is reached. Their credentials at that time would not truly reflect the effectiveness of the program or the skill of the student
4. Most important, many may not return to complete their education in the 12th grade

In District 2, two of the cosmetology instructors said "no," believing immaturity could hinder development of a successful program.

In addition, it was felt that a great deal would be forgotten during the senior year as most students would not attempt to take the State licensing exam until completion of the program. Incentive for taking the exam would not be present if students have to return to school for the senior year.

Two auto mechanics instructors stated that this program could not be offered because (1) students are too immature, (2) students would not have the necessary physical strength or dexterity, making use of tools and machines dangerous, and (3) students would forget too much during the senior year.

One auto mechanics instructor expressed approval for this type of program, stating that students would have the necessary maturity to take the work seriously. He believed the interest level would be higher because of fewer distractions such as dating, and other out-of-school pursuits.

Counselors

Counselor opinions were solicited on the subject of program scheduling and student adjustment to the instructional patterns. In addition, they were asked for their recommendations to counselors in other districts where either or both of the programs were being considered.

The District 1 counselors were asked if they thought substantially more students in their school would have applied for trade and industrial education if it had been offered on a half day basis in their junior and senior years.

There were mixed reactions to this question; however, most counselors felt that a vocational program that required involvement with academic subjects would not appeal to potential students. Furthermore, they felt that most students at the 9th and 10th grade are too immature and unrealistic to become involved in a vocational program to begin with.

In the same vein, District 2 counselors were asked if substantially more of their students would have applied for trade and industrial education if it had been offered on a full day basis in their senior year.

The District 2 counselors were generally negative in their reaction to this question. Most felt that it would not have increased vocational enrollment because (1) students want to maintain some contact with the home school, and (2) most students interested in a vocational program would enter it at the first opportunity leaving very few to enter in the senior year.

An area of concern to those involved in setting up a 1-year program is the problem of having students double up in English or social studies prior to the year of vocational study. The District 1 counselors were asked if this produced problems of adjustment or scheduling for students. Many counselors experienced some difficulty in scheduling two English classes for students in the first year of the program. However, they did not consider this to be a major problem. Most noted that doubling could have constituted an adjustment problem for many of the students but the tremendous desire to become accepted into the vocational program motivated them to make their best effort. As a result, very few faced the prospect of failure and, in fact, many received their highest grades in this subject area. Some schools permitted students to take one of the two English courses during the summer. As in the case with English, the"doubling up" in social studies did not appear to produce any major problem of adjustment for the students.

District 2 counselors were asked to comment on scheduling or adjustment problems involving the half day availability of English, social studies, physical education, health, and electives.

Most counselors found some difficulty in incorporating electives into a student program. However, they did not consider it significant as only in a few instances was a student actually denied a course that was of particular educational value to him.

Counselors were next asked for their views concerning offering both a 1- and 2-year program within an area school, both with the same number of clock hours of instruction.

As in prior questions concerning the two programs, the counselors tended to prefer the program being offered in their district and professed a lack of knowledge of the operating details of the other district's program.

The majority of District 1 counselors, while not familiar with the actual operation of a 2-year, half day program, felt that it might have merit for the earlier maturing student. However, most felt the later the decision was made the better, and with two exceptions, they all favored offering a 1-year program.

In contrast, the District 2 counselors claimed that it would be difficult to interest students in a 1-year program. The reasons cited most often were (1) students just would not be inclined to leave the home school all day, and (2) the prospect of "doubling up" in English would discourage others.

Counselors were then asked for the recommendations they would make to counselors in other districts contemplating the establishment of a 1-or 2-year program or both concerning planning, programming, student activities and government, transportation, and placement arrangements.

The following is a summary of the recommendations made by counselors from both districts:

Planning The majority felt that counselors should act as consultants to administrators and planning committees when any new program is anticipated. They based this recommendation on the fact that counselors are most sensitive to student needs and potential. They also advocated surveying parents, students, and community resources to determine vocational choices and available opportunities.

Programming The greatest emphasis was placed on the necessity of thoroughly screening vocational program applicants and thereby fitting the program to their needs.

Student Activities The feeling was unanimous that a strong system of communication and coordination should be developed and maintained between the home schools and the vocational facility so that students could be kept informed of school and extracurricular activities.

Placement Arrangements A number of counselors from both districts felt that the primary responsibility for placement should be shouldered by a vocational counselor assigned to the vocational facility. They contended that the home school counselors should function in a supportive role only.

Counselors were finally asked to identify any other positive or negative outcomes of the respective programs. Many of the District 1 counselors felt that the existing procedures in maintaining communication and coordination between home school and vocational facility were causing many students to become socially adrift and reiterated their earlier recommendations concerning revision of these practices.

District 2 counselors also recognized that significant numbers of students who attended the afternoon session at the vocational center that were unable to participate in extracurricular activities.

In summary, the most important outcome identified by the counselors from both districts involved the student's separation from the home school and his exclusion from certain selected activities.

Administrators

Administrators were considered key subjects by the investigators as they are ultimately the ones who must pass judgment on a program and decide whether or not it should be adapted.

The administrators from both districts were asked to list major scheduling, transportation, and other administrative problems they could identify in their particular program.

The District 1 administrators identified two problem areas. One involved the doubling up on English or providing English IV at summer school and the second was making arrangements to reduce the amount of time lost by students from home school activities. The first problem was largely overcome but the majority of those interviewed felt little was done to ameliorate the latter condition.

Problems identified by the District 2 administrators involved student scheduling, student activities, and busing. A number found scheduling to be a major problem. Most students interviewed found some difficulty in fitting physical education, health, and other electives into their schedule.

The basis for most of the scheduling problems revolved around the fact that not all courses in the curriculum were available to vocational students at the same time as in the home school. When it was theoretically possible to schedule them, conflicts often developed.

Most administrators found that participation in student activities posed no problem for students attending the morning session at the vocational facility. They returned in time to be able to participate in extracurricular offerings with only an occasional assembly program being missed. It was an altogether different situation with the student in the afternoon session. The extent to which he was deprived of activities was, in general, relative to the distance between the home school and vocational facility, since most activities are scheduled toward the end of the school day or shortly thereafter.

Most of the administrators indicated that busing was not a major problem; however, some did encounter major difficulties. This occurred, for instance, when a vocational bus missed the connection with the home school bus. Also, it was found that dissimilarities in school hours and school calendars created problems from time to time.

Administrators were asked their views concerning the establishment, where enrollment is sufficient, of both 1- and 2-year programs within one school.

In District 1, a distinct majority believed that the 1-year program was more effective. However, provided travel time to and from a vocational facility was insignificant, most favored offering both programs. The feeling was that it would serve the needs of a significantly larger percentage of the school population. The 2-year program could be entered by students who are able to make an early decision regarding choice of vocational and potential dropouts might be inclined to remain in a less threatening academic climate. With a choice of between two programs, some speculated that fewer students would be deprived of the kind of student activities that is significant to them.

As in District 1, most District 2 administrators favored offering both programs. The preference, however, was for the 2-year program. Most consider it a stronger program and one that will meet the needs of a greater number of students. The 1-year program appeared to them to be slated for the "late bloomers" and those who are indecisive about occupational choice. They felt it would also appeal to postgraduates as well as students unable to enter the 2-year program because of full classes. Students experiencing failure with academic offerings might also be attracted to it.

The following comprise the recommendations made by administrators to those who may be involved in establishing 1- or 2-year vocational programs:

District 1

1. Avoid having students taking two English courses at once; enable them to take English IV in summer school.
2. Revise English IV for vocational students.
3. Offer English IV at the vocational center. This would reduce a major scheduling hurdle as well as considerably ease the academic pressure on the students.
4. Provide indepth orientation to community, students, and their parents in regard to the proposed vocational facility. Make it as realistic as possible and provide for visitation.
5. Establish a student government at the facility.
6. Examine various ways of keeping students informed of home school activities. Make allowances where feasible to enable really interested students to participate in given activities.

7. Broaden curriculum to enable less capable students to participate in the program.
8. Make certain there is real cooperation among the participating schools and districts.
9. Avoid using occupational courses as a "dumping ground." Students should be well recommended.

District 2

1. Be sure proper facilities and equipment are available plus competent instructors who can handle students. A number emphasized the need for competency and the know-how to "reach" students.
2. Broaden vocational facility curriculum so that the less endowed students have a place in vocational training as they do in general education.
3. Put a great deal of effort into educating (selling) the school board and community.
4. Institute a strong discipline plan at the vocational facility. The home school principal should be well informed and also have a part.
5. Give serious consideration to students in the program who want to participate in activities and sports, making allowances when possible. Students will appreciate this kind of consideration. It will pay off dividends in more ways than one.
6. In the beginning, explore vocational needs of students, employment opportunities in the area.
7. Have a planning period given to a review of all possible problems which representative school districts and vocational centers would face. Delegate a committee to examine an area center operating a successful 2-year program quite thoroughly.

8. Most counselors and principals are still college entrance oriented so there is a need to establish closer ties between the vocational facility counselor and the home school staff.

Comments concerning the separation of the student from the home school recurred throughout the course of interviews with students, instructors, and counselors. The final question put to the administrators was designed to get their assessment of the significance of this issue.

There was little common agreement among the administrators from both districts. However, many believed that the students in the programs were not inclined to participate in extracurricular activities in the home school, hence very few would find separation really significant. In addition, the feeling was expressed that either through communication from the home school or contacts with friends, students were kept informed of home school activities. Furthermore, it was pointed out that if a student really expressed a strong desire to witness or participate in a particular activity, it would be possible in many instances to accommodate the request. For instance, some administrators released students by special appointment. Some administrators felt that many students reached a level of maturity at which they could take the separation from some activities philosophically. Another view was that many students developed close ties with peers at the vocational facility thus there was even less need for contact with the home school.

CONCLUSIONS

Although the District 1 males received a significantly higher grade on the New York State Comprehensive Examination in Auto Mechanics than their District 2 counterparts, it cannot be concluded that any observable differences existed between the two groups which could be attributable to the particular instructional program. Factors such as selection criteria and preprogram competency levels need to be considered before achievement of the two groups can be compared.

On the basis of employer evaluations, little distinction can be made between the two groups in their mastery of vocational content theory or manipulative skills. However, it did appear, on the basis of ratings given by cosmetology employers,that the females from the 1-year programs were able to learn their job duties more quickly than their 2-year program graduate counterparts. It can only be conjectured whether this difference was due to the fact that the District 1 females had indeed mastered theory and skill to a greater degree or whether the completion of vocational instruction in a single year merely gave them the advantage of more immediate recall.

While the majority of students from both programs reported satisfaction with their daily school schedules, the investigators were able to draw several conclusions on the basis of interviews held with the students. The females in the 2-year program were considerably less satisfied with their schedule than either their District 1 counterparts or the District 1 and District 2 males. More instances of fatigue were reported by those females in the half day program than the full year program graduates.

Even though overall satisfaction with their program was expressed by all of the graduates, a substantially large number of respondents reported dissatisfaction with home school communications and bus travel, with the overwhelming preponderance of criticism directed at severance from the home school and not being informed of home school activities. The females were particularly concerned with being separated from their home school and some, particularly in the half-day program, reported feeling stigmatized and looked down upon by the academic students.

Parental comments seem to reflect similar attitudes, as witnessed by the lower percentage of program approval registered by parents of females from both groups. This was also reported by the male students, but to a lesser degree.

On the basis of this investigation it would appear that the females were more socially oriented to the school setting and hence more sensitive to any disruptive effects of a particular instructional pattern. On an overall basis the males were better able, in both districts, to make the necessary adjustments involved in extensive bus travel and home school separation.

The information on the job training relationship of the vocational graduates shed little light on the effect of the instructional program on job choice. The job market is probably the most important factor to be considered by administrators when establishing a vocational program. Employment opportunities in automechanics and cosmetology were not comparable in the two districts. This became especially evident when interviewing the cosmetology graduates who indicated in several instances that they would have preferred another vocational area and that job opportunities in their field were not plentiful.

The investigation revealed that a very low percentage of the students from the two districts applied for any postsecondary education. Those who did apply enjoyed a relatively high percentage of acceptance. However, it appears that the vocational graduates, regardless of instructional pattern, view their vocational program as terminal and give little consideration to the possibility of advanced training at this point in time.

Job satisfaction represented another area in which conclusions could not be made concerning the relationship of the factor to the instructional pattern. Job satisfaction seemed relatively high in both groups and while the District 1 students reported a somewhat higher percentage no reasonable connection could be made between this and the fact that they had been in a 1-year program.

Neither program demonstrated significant superiority in terms of the factors investigated. However, the findings do serve to highlight conditions which administrators need to take into account before planning a vocational program involving instructional patterns which require students to spend time away from their home school.

The study does indicate nevertheless that students in the 1-year program which was developed because of geographic difficulties, received at the least a comparable vocational education in the 1-year full day program.

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VT 005 603
The Industrial Training Act, Report of the BACIE Conference (London, 29 April, 1964).

British Association for Commercial and Industrial Education, London (England)
MF AVAILABLE IN VT-ERIC SET.
British Association for Commercial and Industrial Education, 26a Buckingham Palace Road, London, S.W. 1, England ($1.20).
Pub Date - 64 38p.

CONFERENCE REPORTS; *FEDERAL LAWS; *VOCATIONAL EDUCATION; *INDUSTRY; *LABOR UNIONS; FEDERAL PROGRAMS; FOREIGN COUNTRIES
BACIE CONFERENCE, LONDON, ENGLAND, APRIL 29, 1964; BRITISH ASSOCIATION FOR COMMERCIAL AND INDUSTRIAL EDUCATION; INDUSTRIAL TRAINING ACT; *ENGLAND

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The Industrial Training Act

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The Industrial Training Act

Report of the
BACIE Conference
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J. G. STEWART, CB, CBE

Chairman: SIR WILLIS JACKSON, FRS

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The Industrial Training Act

Rt. Hon. JOSEPH GODBER, MP
Minister of Labour

This is the third time in successive years that the Minister of Labour has been invited to open a BACIE Conference. I am delighted to be continuing a tradition established by my predecessor, who did so much to bring about the important changes you will be discussing today. I am delighted, too, that BACIE should be holding a Conference to discuss the Industrial Training Act so soon after it has reached the Statute Book. I am glad also to have the opportunity to acknowledge the valuable contribution which BACIE has made, and is making, to convince industry that investment in training is an essential ingredient of sound management. I am sure that BACIE has played its part in encouraging industry to give a warm welcome to the Government's proposals and to the Industrial Training Act.

I think we must all admit that, despite a generally greater awareness of the importance of training to economic growth, there has not until now been the increased investment in training for which we had hoped. The proportion and number of school-leavers securing apprenticeship and other forms of training last year did not live up to the encouraging improvement achieved in 1961 and 1962. Too much of the load of training is still left to a limited number of firms.

I do not, however, propose to dwell today on the shortcomings that have existed – shortcomings which made the Industrial Training Act necessary. These are, I think, too well known to you to need further elaboration on my part. It will be more rewarding to look ahead to the tasks which face the industrial training boards; and to the fresh stimulus that they will bring to the whole subject of training.

The boards' three main duties will be to see that a sufficient number of people are trained, to make recommendations about the content and standards of training, and to see that the financial burdens of training are fairly spread throughout the industry concerned.

Main Duties

If a board is to discharge its first duty adequately, it will have to draw up a manpower budget taking into account, on the one hand, the number already being satisfactorily trained; and, on the other, the estimated requirements of its industry for different occupations and at different levels. The board will have to find answers to such questions as: Where, and how acute, are the shortages? For what skills will there be increased demand in the future? What effects will technological and other changes have on the number of skilled people required? What allowance should there be for wastage?

It will be no easy task to get these sums right. Prediction of manpower requirements is notoriously subject to error; and the boards, like any other planning body, will have to be ready to make adjustments as errors become evident. They will, of course, have every assistance possible from my Ministry's Manpower Research Unit and no doubt also from the industrial committees which are now being set up by the National Economic Development Council.

Having obtained answers to the question how many more trained men and women are needed, it will be the boards' responsibility to decide where, and by whom, the capacity for training to the extent required is to be provided. I anticipate that, as in the past, the bulk of training will continue to be provided in individual firms; but the contribution of individual firms may have to be supplemented. One way of achieving this may be by developing or expanding group training schemes. These will enable the smaller employer to provide the range and quality of training which is frequently not possible at present. Alternatively, boards may look to technical colleges and Government training centres to assist in meeting shortages of training facilities in industry. Probably, too, boards may make special arrangements with some of the larger firms who have spare capacity in their training centres. Finally, a board may decide to establish its own training centres and either recruit trainees direct or provide training for young people recruited by individual firms.

The development of special training centres, whether by firms or public authorities, will also help in the development of off-the-job training to which I am going to refer presently.

A board has not only to decide on the numbers to be trained, but also on the methods and standards of training that should be achieved. The board will make recommendations on these matters and the force of these recommendations will rest on the levy-grant system. There will be no compulsion. A firm may choose to train or not to train; and if it trains it may follow the board's recommendations or not. But if a firm is not training in accordance with the board's recommendations it will not be entitled to a grant. There is no doubt whatever that the effect of the levy and grant system will be to provide a very real and substantial incentive to employers to follow a board's recommendations. It is in this levy-grant system that the strength as well as the flexibility of this new Act is to be found.

As I see it, there are five main issues which a board's recommendations will cover.

First, the form training should take. In the past, the greatest amount of training has been provided, often in a rather haphazard and unsystematic way, on the job. 'Sitting by Nelly' is the term frequently used to describe this form of training. It depends to a great extent not only on the ability of 'Nelly' to instruct, but also on the time she has free to do so. I do not myself feel that it would be either possible or desirable to abandon experience on the job as an important element in industrial training. I do, however, think it important that boards should place considerable emphasis on the development of [illegible] initial training off the job under conditions which give the [illegible] the opportunity to learn thoroughly the basic skills of his or her trade. This period of basic training may be quite short or may last as long as a year or more, according to the level of skill involved. Its cost will consequently vary from one industry or occupation to another; but I am certain that the costs will be fully justified by subsequent performance. The period of basic training might be followed by planned progression on a series of jobs where the trainee makes some contribution to production but is under close supervision.

The second question is the content of training. I do not think that boards can be in a position to make useful recommendations about the content of training until they have done two things. First, there must be a careful analysis of the skill that is to be learned; then there has to be a decision whether the training should cover a single, fairly limited skill or whether the trainee should receive instruction in a range of related skills. There are grounds for believing that the broader the training a young person receives the more adaptable he is to change later in life. This is a question which the boards will certainly have to consider closely.

The third – and closely related – question is: how long should the period of training be? It will, frankly, be something of a revolution to make the length of training a measure of the time it takes to acquire the skill and judgment necessary to do a given job rather than a fixed standard period for a whole range of occupations. It seems clear to me, however, that if we are to make the whole training period really efficient and purposeful, there can be no possible justification for retaining a period of training of five or even four years for a great many skilled trades for which it is at present customary. Changes in this field will no doubt have repercussions on conditions of employment for young people in the industry concerned, but those will be matters for the joint negotiating machinery in the industry to consider. We have got to learn to shake ourselves out of the lethargy of thought and initiative which surrounds the old concepts of the apprenticeship system.

Further Education

The fourth matter for consideration by each board will concern further education. The Act will require boards to specify, as part of their recommendations, the courses of further education which should form part of the programme of training. This means that if firms wish to secure a training grant they will have to be prepared to make it possible for their trainees to follow the prescribed course of further education. As many occupations come to require a larger and larger element of diagnostic, as opposed to manipulative, skill, the importance of technical education will become greater. It is therefore very important to secure close co-operation between the boards and the educational system. Hence the need for strong educational representation on the boards and I am very glad to have the assistance of my colleagues, the Secretary of State for Education and Science and the Secretary of State for Scotland, in securing this.

Fifthly, the boards will have to have some way of seeing that the trainees achieve a reasonable standard of competence. This means that boards will have to consider proficiency tests or other means of ascertaining the progress of trainees. A single test of proficiency at the end of a long course is not necessarily the right answer; a system of regularly assessing and recording progress may well be better.

These, as I see it, are the major problems which the boards will have to face up to. The requirement that their proposals must have the Minister's approval, and the incentive of Government assistance for worthwhile schemes, should encourage the boards to attack these problems boldly. For the country's sake, and for the sake of the young people coming into industry, I confidently look to them to do just that.

In order to carry out the functions that I have described, boards will have to recruit and train a considerable number of training officers whose responsibility it will be to advise individual firms who want assistance in improving their training, and also to advise the boards whether firms' training arrangements satisfy the board's standard for grants. The experience of the Netherlands suggests that this training development and consultancy work is the most effective means of raising the quality of training throughout industry.

Not only will boards have to recruit their own training development officers; they will have to see that firms do so as well. It is a matter of great concern to me that at present there are so few qualified training officers in industry. You cannot have an effective training programme unless, first, top management cares about training and, secondly, there are people with the ability to translate general policy into a well run training system. I believe more firms are coming to recognise this; but we must spread the idea still further.

That is the reason why I decided that my Ministry should pay the fees of students sent by industry to the training officers' course which starts in a few days' time. I have very much welcomed the initiative taken by BACIE, together with the Institute of Personnel Management and the Industrial Training Council, in organising and sponsoring this course and the earlier course held last year at Garnett College. It is indicative of the way things are going that the course at Bristol has been over-subscribed, whereas support from industry for the course at Garnett College was disappointing. I very much hope that these, and future similar courses, will prove to be successful; that they will attract the support they deserve; and that they will go some way to meeting the vital need for more expert training officers.

Another problem to which the boards will have to turn their attention at an early stage is the shortage of competent instructors. My Ministry is making a substantial contribution by doubling the capacity of our instructor training centres so as to be better able to meet the demand which the Act is certain to stimulate. But the boards will have to make sure that industry takes full advantage of these and other appropriate courses before we can expect any great improvement in the quality of our manpower.

Central Training Council

I would like to say a word or two now about the Central Training Council. Although this body will have no formal executive responsibilities, I expect that it will exercise a powerful influence on the work of the boards and on the operation of the Act generally. I envisage that its main functions will be to keep under review the performance of the different boards and the adequacy of training arrangements in industry generally. Its advice on such questions as training methods, the use of tests and research, will be invaluable to the boards and to the Minister; and will not lightly be disregarded. The Council may also wish to give particular attention to training for occupations which are found in virtually every industry such as commercial and clerical occupations. The Council might be able to recommend standards for such occupations which could be adopted by all the boards concerned. I believe that this relationship between the Council, the Minister and the boards will prove to be one of the most fruitful aspects of the Act.

As you will know, I am pressing ahead as quickly as possible with the setting up of boards for four of our major industries – engineering, construction, iron and steel, and wool textiles, and I expect that this will be accomplished by the early summer. By that time, too, the Council will have held its first meeting. I intend also to push on with the establishment of boards for other industries, although in view of the complexity of the issues to be examined – and my experience suggests that every industry believes that it is in some special way unique – it will be some time before the whole range of industry can be covered. The steps I have already taken will show, however, that I attach the greatest importance to getting the new system in operation without delay. I am convinced from the talks I have had that industry also has a sense of urgency. I believe that the boards will provide the machinery to translate this sense of urgency into action.

Chairman: SIR WILLIS JACKSON, FRS

Legislation, Industry and Education

C. HENNIKER-HEATON, FIL
Director, The British Spinners' and Doublers' Association
Chairman, Committee on Day Release

In addressing you on 'Legislation, Industry and Education', I am rather like the meat in the sandwich. I am essentially speaking as an industrialist, a time served apprentice – although I no longer pay any union dues, later a manager and a salesman and more recently the spokesman of a large employers' organisation. But in the past 37 years I have had many contacts with politicians and civil servants and although I had little formal education myself – or perhaps because my own schooling was interrupted – I have taken a great interest in education. For some years I was a member of a Commonwealth Parliament and I have some, although not a great deal of, experience of teaching. What I shall say today is therefore based entirely on practical experience and not on theory. It is for you to judge whether that detracts from or adds to its value.

Industry and the Public Services – the 'we and they' mentality

Despite many personal friendships with civil servants and educationists, and despite many examples of co-operation between industry and the public services, I have often noted a certain amount of feeling and even friction between them. Historically this feeling probably arose as between the industrialists who were supposed to be simply getting as much as they could for themselves, and the civil servants and educationists who were performing a public service. Industrialists often regarded educationists in particular as long haired, theoretical idealists without realising, or at least without caring, that many of the educationists regarded them as a lot of thick-skulled, grasping autocrats and exploiters. The same kind of feeling has also at times been evident between industrialists and those civil servants most connected with the social services, whether in Curzon Street or St. James's Square.

There was once a most unusual civil servant called Humbert Wolfe. He was a first class poet and satirist. He wrote the lines:

> In that city they sell and buy
> Nobody ever asks them why;
> Since it contents them to buy and sell,
> Why – God forgive them – they might as well.

I have enjoyed quoting it to red faced burra Sahibs in Calcutta and grey faced tycoons in Birmingham. It is very clever but of course, like so many other clever things, it is also very unfair.

We industrialists know exactly why we manufacture – and why we buy and sell. We do it to provide a livelihood for ourselves and, if we have them, for our wives and children. We incidentally provide a livelihood for a lot of other people – including civil servants and poets and schoolmasters. Frequently we are fortunate enough to enjoy our work and we like to get on with it – without interference to ourselves and without concerning ourselves too much with others. We don't always realize what they do for us.

But the position and responsibilities of industry have changed greatly during the past 150 years and particularly during this twentieth century. We as industrialists have duties to the whole country and not only to ourselves and our own firms. Those duties will best be fulfilled by co-operation wherever we reasonably can with our legislators, and by accepting willingly all the help that educationists can give us – in short, by the removal of the 'we and they' mentality on both sides.

I don't think industry itself has quite realized how this change has come about and how logical it is.

Estates of the Realm

In the old days, there were – under the King – three Estates of the Realm. These Estates were the nobility, the clergy and the commons. The job of the nobility was to fight, to provide the arms and the armies, to hold the broad acres of England for the King and to lead and protect the people. The clergy were not merely the spiritual pastors; they were the educated men and intellectuals of the day – and often the politicians, as for example Thomas à Becket and Cardinal Wolsey. The commons were the body of the people – the squires, the craftsmen and the great mass of farmers and farm workers.

And so it went on for some 700 years after the Norman Conquest, although I believe that Edmund Burke, the great orator, suggested in about 1792 that the gentlemen of the press sitting in the gallery of the House of Commons, with their growing influence, might be called the Fourth Estate.

I would now suggest to you that, over the last 150 years, not a Fourth Estate but a quite new bigger and more powerful Estate has been emerging. This Estate is 'Industry and Commerce' – and in this I do not draw any distinction between management and workers for they are, or should be, one. This new power is merging with, and gradually dominating, the Three Estates I have described.

The old Nobility may still die for their country as officers in the Brigade of Guards or the cavalry regiments, but they die no better than any Lancashire fusilier or Kentish yeoman whose name is on a country war memorial. With notable exceptions such as Dukes of Devonshire or Earls of Derby, the great families have tended to divest themselves of their public duties at the same time as they have had to sell their lands.

It is no longer the nobility but industry which supplies the sinews of war – the money for it, the engines of destruction and the men to operate them. Although we are now led – although not always protected – by a breed of professional politicians, many of our leading parliamentarians, including some of the Ministers who played a great part in winning the last war, have served their time in industry and commerce. Think for example of Lord Woolton and Ernest Bevin. Many rank and file MP's also are drawn from industry. Turning to the House of Lords, men like Billy Rootes, Rab Sinclair, John Turner and others, now Peers of the Realm, won their rank for their work in industry rather than, as another poet described it, because 'their grandsires were knighted in battle or their granddams were kissed by a King'.

As regards the Second Estate; the clergy – in England at least – have withdrawn themselves from political and indeed to a great extent from intellectual leadership. Among the intellectuals who have taken over from them, men trained in industry and commerce have made their mark. For the present day intellectual who matters is not a Latin scholar. He is a scientist. It is this type of intellectual who will help our country to survive in war and be prosperous in peace – whether he now works for the Government or is seconded to Government projects or whether he still works for the great modern industrial firms, as so many of them do.

Finally, we come to the Third Estate, the commons; not the House of Commons, but the whole body of the electorate. Instead of the great majority of these being engaged in agriculture, only 3.74 per cent of all the workers in civil employment now work on the land. Most of them, as a result of the industrial revolution are working in industry and commerce as operatives, as overlookers, as clerks, as managers, as directors or as owners.

From Paternalism to Social Legislation

As the change took place from family, cottage or small scale industry, the conditions of work continued to be laid down for the workers by a father figure, who was the master craftsman, the head of the small workshop or factory, or even an *entrepreneur*. The first trade unions in England had been formed not by workers but by employers who banded together after the Black Death to protect themselves against the exorbitant demands of the workers, but in the eighteenth century the boot was on the other foot. There was an abundance of workers and under the paternalistic system which still obtained there were good fathers and bad – that is to say, good employers and bad. At that time many of the workers were on the bread line, or below it, and were exploited. Workers' trade unions were formed. But this was not enough. Basic factory legislation had to be passed and gradually social legislation covering unemployment benefits and old age pensions was brought in.

These basic enactments have been modified and improved over the years but, until recently, the British Government has not been prepared to go further in a number of fields where action has been taken in other countries.

One of the reasons has been that trade unions have been becoming stronger and more widespread and, with some show of good reason, successive Governments put forward the view that many social questions can best be settled by collective bargaining between unions and employers' organisations in the light of conditions in the various industries. It was argued that these varied too greatly for general legislation to be passed.

In some cases, enlightened and successful employers have been giving social benefits of their own accord; and the record of industry as a whole has been by no means unimpressive.

We have now, however, come to a stage where the general standard of living and prosperity in the country has become so high that we have been taking a look and seeing whether it is not right that all workers should be guaranteed certain advantages. Leaving it to collective bargaining alone or relying on voluntary action by the employers – which was sometimes encouraged and, I fear, sometimes discouraged by their organisations – has at least three dangers.

First, there are always some workers who are left out, and these sometimes amount to quite a large proportion of the working population. For example, redundancy or separation payments in the case of unemployment owing to technical progress have been given by many firms, but there are large numbers which have done nothing.

A second danger has also been becoming apparent. If these matters are left entirely to collective bargaining there will be many bitter fights between powerful and sometimes militant trade unions and strong and sometimes obstinate employers' organisations. The results of these battles will sometimes go one way and sometimes another. The effect will still be uneven.

Thirdly, workers in monopolistic organisations such as nationalised industries, which are not necessarily run on commercial lines, have a great advantage.

More and more it has become apparent that legislation in certain directions is the right answer, although there will continue to be wide scope for collective bargaining within the legislative framework.

I must here point out in parenthesis that, during recent years, employers and employers' organisations and workers and their trade unions have begun to realise that there can be prosperity and good working conditions for all if we can only co-operate together, instead of fighting each other, and thus obtain the maximum productivity. Good employers breed good workers. Good employers' organisations breed good trade unions.

Employers' organisations and trade unions having thus come much closer together as regards the encouragement of productivity, it is now up to us to come together in the same way to secure the best results from legislation. We as employers must realise that such measures as the Contracts of Employment Act, the Industrial Training Act and a Redundancy Payments Bill, still to come, are good in principle, and salutary in practice.

An employee is entitled to a fair period of notice; a young worker is entitled to be well trained and well educated. An operative made redundant by technical change, and not finding work immediately available, should get more than a week or two's wages in his pocket. The treatment of workers as regards sickness pay should not be as widely different as it is from the treatment of staff in the same circumstances. It is reasonable that much of this should be secured by legislation instead of employers' organisations and unions fighting a long series of guerilla actions to achieve the same results. If there is any industrialist among us now who still believes that all of it should be left to the free choice of the industrial employer or firm, or that it can be entirely achieved by collective bargaining at a time when we still have such a wide variety and quality of employers' organisations and unions, I can only say that he is living in the past and large scale industry can no longer be run as a Victorian father ran his family and home.

Sharing the Burden

You may think then that I am a starry-eyed socialist, perhaps even a nationaliser. Not at all. I believe that competition in the majority of industrial and commercial fields is still an excellent and a necessary thing. It will not only increase our efficiency but will preserve us from the dangers of autocratic Government. Observing the mechanism of Government while working for nearly 40 years in industry, I believe that the only way in which free enterprise can survive is for every industry, every firm and every employer, to do their share and pay their share as regards social progress. The legislative measures of which I have spoken are designed to encourage that. Any firm that cannot pay its share towards these improvements must go to the wall for it is failing to pay the bill for social advancement, just as it must go to the wall if it cannot pay its bill for raw materials. It is up to us in industry to take an active and understanding interest in the social changes which are taking place. We must help to ensure that the necessary legislation is reasonable rather than wait to have something thrust upon us and complain about it afterwards.

If the leaders of industry and commerce on the employers' side do not help to establish and govern this new world; if the leaders on the workers' side are not responsible and merely try to grab what they can get, we shall be governed entirely, or even taken over, by an autocratic Government – of the right or the left – with an ever growing army of civil servants, economists and theorists. Let me say here in parenthesis that many civil servants are first-class people with first-class brains who are willing to help us, and will help us, if we play fair with them.

I have been talking on general lines, but now let me get down to an individual case of how industry should recognise its responsibility and how it should play its part. I would also like to point out what the Government of the day and the Government departments concerned should do to ensure that industry has this opportunity.

The bringing forward of the Industrial Training Bill and the passing of it into an Act provides a splendid example of how the necessary co-operation can be achieved. The results so far have been much better than they were in the case of the Contracts of Employment Bill, which had to be radically altered during its passage through Parliament.

The Industrial Training Act and Co-operation with Government

In preparation for the setting up of Industrial Training Boards by legislation, the Government consulted what, for want of a better term, I must still call both sides of the industry. On the one hand were the BEC and the FBI, soon to be merged, I hope, in a new organisation; on the other was the TUC. Some industrialists admittedly still thought that the extent of industrial training to be provided should be left entirely to unilateral decisions by the employers concerned, and some argued that everything related to training was entirely a management function. I am happy to say, however, that the great majority of employers – and therefore the organisations speaking for them – accepted that, although many good things had been done by private enterprise and voluntary effort, the scale had not been big enough, quality of training was uneven and the burden had been unequally shared.

The BEC, which was the organisation mainly concerned on the employers' side, therefore agreed wholeheartedly with the principles for industrial training set out in the White Paper. During the preparation of the Bill, the very closest liaison was maintained between the Ministry of Labour, the responsible Government Department, and the representatives of the BEC and TUC. The BEC set up a special committee of four or five persons, of which I was the Chairman, in order that the employers should be available for consultation at any moment, and we were frequently consulted. I understand that the TUC worked on similar lines.

As a result, I believe that we now have an Act which is easily comprehensible, and which is capable of creating a revolutionary improvement in the scope and quality of training in this country. It is an ideal opportunity for representatives of both employers and workers to co-operate with the representatives of the Department of Education and Science and the Ministry of Labour.

I am not going to talk much about the provisions of the Industrial Training Act because this is a very big subject. The Minister has given an admirable exposé on the intentions and practical implications of the Act and, in any case, it will be covered very capably by Mr Lowthian later. I am not afraid of the fact that he will look at it from the TUC point of view because I know how similar our feelings are, and I for one am glad that employers and workers will be working on the boards with equal representation.

Many of the matters connected with training are at present covered by joint agreements arrived at during collective bargaining. Certain anomalies have arisen in these agreements due to the way in which collective bargaining is sometimes carried out on a tug-of-war basis. The tug-of-war basis is never good in collective bargaining and, where training and apprenticeship questions are concerned, it is entirely out of place. I hope that the impartial, disinterested discussions which should take place on the Industrial Training Boards, between employers and workers who are interested in education with the help of the educational representatives, will result in existing joint agreements being improved and better new ones formulated when the employers' organisations and unions meet.

Integration of Training and Education

One interesting point is that the boards will be responsible for training, whereas the Department of Education and Science will continue to be responsible for further education. One may well wonder where the dividing line between these two is and, here again, full co-operation will be required. I do not think the Department of Education and Science is likely to complain if training courses run under the auspices or at the suggestion of the Boards contain elements of education. Nor do I think that the Department will be unreceptive as to the training aspects to be included in their courses of further education.

Here is a splendid opportunity for employers and workers to get together with civil servants and arrive at results satisfactory to all.

I quote from a letter I received a few days ago from a friend in the Civil Service. He is referring to the Industrial Training Act and its implications for further education. He writes:

> The implications of the Industrial Training Act are potentially very far reaching. This is not only because of the effect it will have on day and other forms of release, especially for boys and girls in the more skilled jobs, but also because of the scope for the development of integrated courses of training and education in the colleges. But neither a big increase in day release nor the spread of integrated courses will come about unless there is the fullest co-operation between industry and the education service,

and a greater readiness on both sides to give and take and to understand the point of view of the other than often exists at present. The necessary co-operation will only be achieved if deliberate and positive action is taken, and the Act provides the machinery through which – given the right attitudes – the necessary co-operation can become effective at every level from the board itself to the individual firm and college.

Perhaps you may say that I have chosen an easy example by dealing with industrial training where there should be no division of interests but, in most of the matters which can be and should be covered by social legislation, it is still true that there is not really a division of interests.

Let us take the question of redundancy or separation payments which will be covered by legislation, and of improved benefits for workers in case of sickness, which are matters under debate at the present moment. The employers of course will not want the level of payment to be crippling, but farsighted trade unionists will realise also that these payments have eventually to come out of the public purse. Firstly, they will not wish that they should be exaggerated nor administered in such a way as to encourage abuses. Secondly – and this, if Mr Lowthian will permit me to say it, is a point which is very much in the minds of trade union leaders – they will not wish there to be unfairness between workers, so that they will try to ensure that a reasonable and sensible scheme for the benefit of the country as a whole, as well as of the operatives, should be embodied in the legislation.

If anybody thinks this impracticable, I would have liked them to have seen the way in which the employers' organisations and the unions worked together to draw up a compensation scheme for displaced workers under the Cotton Industry Act, 1959, which reorganised our industry.

I would like to make a point about what the Civil Service and the Government side must do to help us in this social legislation. It may be all right to have complicated legal language in certain Acts to which only the lawyers need to refer but, for social legislation, the Acts should be in the plainest and simplest possible language, so that those to whom they apply can understand them. It is not always good enough merely to have a series of explanatory booklets.

I do not know whether you realise what happens when a Bill has to be drawn up. The department concerned, having settled on the principles to be embodied on instructions from the Minister, consults the departmental Solicitor, who then sees the Parliamentary Counsel, who is an expert in drawing up Bills. It is at this stage that the trouble often occurs. The department and the department's solicitor are discouraged from any attempt at doing the drafting themselves, and I am reliably informed that some Parliamentary Counsel have an extraordinary genius for preparing quite incomprehensible clauses of immense length and full of references to other clauses or Acts. I am equally reliably informed that in many cases this is not really necessary because there are other Parliamentary Counsel who achieve a remarkable degree of clarity while still ensuring that loopholes are not left for misunderstandings.

We always draw up our own agreements with the unions, and we then submit them to a lawyer who puts us right if we have left gaps. We would not dream of letting him draft the agreements because we have seen what the results have been in the past when he had done so. Of course, it is much more difficult to draft a Parliamentary Bill than an industrial agreement, but I do insist on the importance of clarity of language and the greatest practicable shortness in drafting social legislation.

We at the British Employers' Confederation welcome social legislation based on agreement between the Government, employers and workers. It is by planning and working for a better industrial future that we shall ensure a well educated, well trained and stable labour force in our factories and offices. They will help us to prove that the free economy of England can still beat the world. It is nonsense to think that we shall need only robots to tend the machines. Those machines must be invented and made and improved and adapted. Skill must be fostered and skill must be paid for.

We used to rely on our Navy to keep the trade routes open. British industry then expanded wherever the winds blew and the tides ran. Despite the many trade barriers of an obvious or hidden kind which now exist, we can still expand if we keep just one step technically ahead of our competitors.

Industry and commerce by participating in the good Government of this country, by fostering and encouraging education and scientific progress, by ensuring that British workers, managerial or shop floor, are still the best workers – and that today means the best trained and educated workers – can keep us in the lead.

We in industry and commerce are proud of this country's past. It is up to us to fashion a successful present. We can be confident of its greatness in the future.

Chairman: R. G. BELLAMY, OBE, TD

Education and Training Officer, The Electricity Council. Member, Central Training Council
Chairman, BACIE Council

Trade Unions and the Industrial Training Act

G. H. LOWTHIAN, CBE

Chairman, Trades Union Congress

There are many interpretations of the Industrial Training Act and it does not behove us at this particular stage to become too emphatic in our approach to the problems that will be raised, as a result of the Act, in the industrial, educational and economic fields. But I would say on behalf of the trade unions that, without doubt, this is one of the most popular pieces of legislation that has become an Act of Parliament. The facts of this Act are something that we trade unionists have been striving for over a very long period. We were convinced, when we were dealing with the Carr Committee, that there would come a point when legislation would be necessary if we were going to have a properly co-ordinated and consciously thought out policy in relation to training. From the trade unions' point of view we believe that in this day and generation, and for the years that lie ahead of us, training on a far wider field is fundamental to British industry.

As we move into the new era of automation and mechanisation, there will be more people who will need some form of training, whether it be for a lengthy period or a short one – that is, if British industry is going to hold its place in the economy of the world, and provide us with the opportunity of raising living standards and the living of fuller and more useful lives. This Act is basic to the future of British industry. Indeed, it has always been an anomaly to me that we have lacked overall legislation in relation to training. Instead, we have had a voluntary system which has inevitably led to the creation of patchwork facilities, and there is no one in this audience who can say that we have had a satisfactory approach in any field over the whole of any particular industry – hardly a creditable reflection on a country which began the industrial revolution almost two centuries ago.

Planned Training Essential

I appreciate that in this country we place great value on the voluntary method: the trade union movement itself is an example of this, of working men voluntarily joining together for a common objective – except where we impose the closed shop! If therefore we frequently emphasize the need for planning, or control, it is not because this is a basic dogma of ours. In the field of training, as a result of the Carr Committee, we tried the voluntary method and I, on behalf of the trade union movement, pay tribute to a great number of employers who played a very important part in the development of training. But I also criticise, as severely as I appreciate the good, the bad employers who pay little or no attention to training.

My criterion, as far as the necessity for legislation is concerned, is that the State must act when a matter is of almost universal common interest, and then certain minimum standards must be laid down for the guidance of industry as a whole. And I think that this is very true of industrial training. Why we have had legislation on academic education for so many years, but not on industrial education, is beyond me. Parents can suffer legal penalties if they do not ensure that their children go to school, and education authorities have definite duties laid on them by the State. But here we are, a country which lives by exporting the craft skill of our people, yet until recently the acquisition of this skill was left to chance, or the haphazard efforts of industry.

As I have indicated, we in the trade union movement have no desire to level an attack on industry as a whole. We appreciate what has been done, but we do know that the work of the Industrial Training Council, on which I have been privileged to serve since its inception, has revealed very serious flaws in the field of training. We know that there has been a desire on the part of many people engaged in industry to be made more aware of what can be done and, indeed, what should be done, so far as training is concerned. Quite apart from the fact that hundreds of thousands of youngsters have no more formal training after they leave school, even when there are apprenticeships the training is not necessarily of a uniform standard. Even within specified industries, not all companies are giving the same facilities. Some might be of top class calibre; others in the same industrial group might be doing nothing at all. The Industrial Training Act, in our opinion, gives us an opportunity for conscious direction towards training. For the first time in the whole of industrial development in this country is this the case: it is of tremendous importance. In the trade union movement we are pleased that there is now a great prospect for training facilities to be spread more widely, and to aim at better standards in general. I can assure the community as a whole that the trade union movement will give wholehearted support to this measure which the Government has introduced.

We would hope that, in applying our minds and our abilities, employer organisations and trade unions, in company with Government representatives, will not look upon the question of industrial training as being a partisan subject. We cannot afford, in the climate in which we live, to engage in a constant tug-of-war. It is a responsibility of the community, and of industry, that every boy and girl be given the opportunity of finding his or her niche in society and in the industrial or commercial environment of the community. Each of us in our own way, whether we be from the Government, from employers, or from trade unions, have a responsibility, not to our own particular interests but to the young people who have a lifetime to render service to the community.

Too often only the differences between employers and unions receive publicity. True, there are genuine differences between us, but I suggest that there are also common objectives which we have to achieve, common objectives in which we can jointly work for the benefit of the community : and the Industrial Training Act provides us with such an objective. Within the unions we very much want to see better training facilities which will enable our young people not only to become masters of their crafts but also to lead fuller lives to enable them to make a contribution to the society of which they are part.

There are many unanswered questions in relation to the size of the levy; how allocation to Industrial Training Boards will be determined; whether men employed in maintenance in a particular industry will be attached to the main industry: there are, to all of us, many such imponderables as to how this Act will operate. The fact that there are so many questions to which no categorical answer or assurance can be given at the moment is an indication of the time that we have wasted in industrial Britain on the question of training: because if we had had a conscious approach to it, the questions would not have been asked; we would have solved them in the past.

Era of Change

After nearly two centuries of industrial development we have to admit, now that this Act has been passed, that all of us – employers, Government Departments and trade unions alike – have got to start from scratch, in the sense of conscious planning as a co-ordinated industrial development. I believe this is a condemnation of our present training system. Employers obviously want a well trained labour force upon which they can base the technological development of their industries. Already, under the Act, there are being established four Training Boards. Of course we will be looking first at the established normal processes of training, but even in these industries there are vast numbers of young people entering who receive no formal training whatever. The boards will have the responsibility to see that the whole field of training is reviewed. In apprenticeship we can no longer think in terms of the nineteenth century, as we still do to a great degree. There will be nothing magic in the word 'five' in relation to the period of training. There will be nothing sacrosanct, in my opinion, in the age at which an apprentice may be considered to finish his apprenticeship. If we live in a period of change, then we have got to be prepared to meet the challenge of change in the institutions that we ourselves have created. I appreciate that both employer organisations and trade unions have got backwoodsmen in so far as that particular attitude to change is concerned.

Not only must we think anew in relation to the traditional forms of training that we have established, we must think anew in relation to the forms of training that we believe must be established. I would remind my trade union colleagues that it is not trade unions that create trades, it is trades that create trade unions. We must have far wider horizons in relation to the field of training. It may be that training will be of very short duration in certain skills, but training of some kind is essential.

We believe, in the trade union movement, that an induction period is of vital importance to young people entering industry. The jump from school to work is far too wide. We believe that the training, which will be the responsibility of industrial training boards under this Act, should include some form of liberal education as well as technical education to the particular calling to which young people are going. The attainment of these objects will give to Britain a reservoir of skilled men and women: trained personnel, who can produce the exports to compete effectively with any other country in the world; give us again some recognition as one of the great workshops of the world, and enable us to maintain a high standard of living for the people we are privileged to represent.

We in the trade union movement welcome this Act. We will do everything that we can to make it work effectively, and to give our young people the opportunity they deserve. This is the target for all of us. The Industrial Training Act provides us with the basis from which we can move, collectively and co-operatively, towards new horizons in British industry. I sincerely hope that the future will see all sides of industry effectively implementing the legislation, and therefore co-operatively achieving a vigorous and healthy economy. With this end in view we commend the Industrial Training Act, and will work for its full implementation in co-operation with all sections of industry.

DISCUSSION

Trade Tests

How will the backwoodsmen in industry and unions, who resist progress yet pride themselves on the autonomy of their organisations, be dealt with ?

Mr. Lowthian:

Boards within given industries shall be *the* authority in relation to that industry, so both trade unions and employers will have to carry out policy enunciated by the boards. This should be the case from the beginning so that there can be no dubiety about the position—then trade unions' and employers' autonomy in relation to training will disappear.

Should the capacity to pass a test, or some other assessment of performance, be the determining factor for the length of apprenticeship ?

Mr. Lowthian:

In my view there is no need for any section of industry to have a five-year period of apprenticeship. Educational qualification, changes in technique, intensification of training, and release, are the factors which should determine the length of apprenticeship. In the construction industry, apprenticeship has been reduced to four years, and trade unions will soon be submitting a constitutional amendment to make it universally four years. I hope we will progress, as in Europe, to a three-year apprenticeship.

What are your comments on grading, or proficiency tests, as practised on the Continent, to maintain some standard of training ?

Mr. Lowthian:

I do not believe in the system of grading, but believe there should be a system of trade tests—for example, those who fail by a margin should have further opportunities. For those who completely fail the apprenticeship tests, it should be industry's responsibility to find another niche for that person's known talents. Therefore, not grading, but categories—i.e. student apprentices, and categories covering different age levels. Age of entry should be flexible according to educational standards, as occurs in the construction industry: young people do come in up to 17 or 18 with a shortened period of apprenticeship.

What is the unions' attitude to re-training, particularly for the over thirty-fives ?

Mr. Lowthian:

The unions will co-operate with the Ministry of Labour on re-training, but there must be an entirely new approach to this question. Between the late twenties and thirties re-training is absolutely imperative if full employment is to be maintained. But this may be difficult for those over thirty-five. It is a big job, too, to meet all the rank and file membership of the trade union to explain this point. They do not welcome the idea of re-settlement—the uprooting of their homes and social life—which is often necessary with a change of trade. This is particularly so with the over-thirties. Also, as I have mentioned to the Minister of Labour, the re-settlement grants are not adequate, and the trade union movement is asking for improvements.

Is adult re-training the responsibility of the boards ?

Mr. Lowthian:

As far as the Act is concerned, yes, it is the boards' responsibility for training at all ages and at all levels. But perhaps for adults this should be given in the Government Training Centres, though I feel boards should bear some of the costs. However, certain elements will be the Ministry of Labour's sole responsibility (boards' responsibilities are primarily to their industries) such as helping those unemployed, disabled, and ex-army regulars: such social responsibility can never be passed to a board.

Formation of Training Boards

What will be the methods of resolving differences of view between Industrial Training Boards and their regional bodies ?

Mr. Lowthian:

In my opinion, the regional boards will not be policy-making—the industry boards themselves will be the policy-making bodies; the regional boards will help to carry out that policy—so there should be no deviation in that particular connection.

Will the board for a particular industry cover all aspects of training in that industry, i.e. will the training of craft apprentices come under the Engineering Board ?

Mr. Stewart:

Each board for a particular industry is responsible for all the employees in that industry. In order to bring, for example, under the Engineering

Board as many as possible of the various craftsmen engaged in engineering occupations, the definitions are being done on the basis that where there is in another industry a separate establishment which is engaged mainly in engineering work, that establishment will be brought under the Engineering Board. However, there will be a great number of maintenance craftsmen spread throughout other industries, not in separate establishments, who will be the responsibility of the boards for those industries. Once the network of boards is established, it should not be too difficult to make arrangements for co-operation between other boards and the Engineering Board in relation to these craftsmen. I do recognise that there will be a period of some difficulty in this respect until all the boards for the various industries have been established.

How is the establishment of a board's staff to be settled? Will this be left to the board, or will it have to be agreed by the Central Training Council?

Mr. Stewart:

Boards are responsible for appointing their own staff, and at the first meeting of any board this will be one of the questions on the agenda. The appointment of a chief executive will be one of the first decisions to be made, and the Minister of Labour will have an interest in this because it is intended that the Government should pay a substantial grant towards the cost of the boards. The boards will require substantial staff to satisfy them that firms claiming grants are reaching a standard which justifies the board in paying the grant.

What steps are being taken to assess manpower needs of Government departments and to ensure that training within Government and local authorities is at the same standard as that within industry?

Mr. Stewart:

With local authorities it is only their direct local Government work which is excluded from the Act; their very large maintenance building departments, for example, will come under the Construction Board. Government departments are entirely excluded from the Act. The Minister of Labour has, however, given an undertaking to the House of Commons that the Government will see that their departments achieve the standard laid down by the boards.

What does the Ministry of Labour envisage the boards might do under section 2 (f) of the Act? This authorizes boards to participate in arrangements under the Employment and Training Act.

Mr. Stewart:

It is hoped that boards will work closely with the youth employment service, making known to young people the range of opportunities open to them. We do not expect the boards to remove from the local education authorities or the Ministry of Labour the responsibility for general vocational advice. Boards will have a private interest in persuading young people to enter their employ; the youth employment officer will have a rather wider responsibility in trying to see that the young person concerned gets the best advice about the whole range of employments available, not confined to employment in any one industry.

Who actually appoints the members of the boards? Is it the Chairmen?

Mr. Stewart:

Members of the boards are appointed by the Minister of Labour, after consultation with the two sides of industry, not by the chairmen of the boards. Naturally, having appointed chairmen, the Minister will consult them about the type of people to appoint to the boards—but the formal appointment, as required by the Act, is by the Minister of Labour in consultation with the representatives of industry and the educational Ministers.

It has been said that regional boards will not make policy. I cannot find anywhere in the Act any statement that actually prohibits them from making policy. In section 3 it says an Industrial Training Board may delegate to any such committee all or any functions conferred on the board by section 2 of the Act—and section 2 contains many things the board can do which would be considered policy-making.

Mr. Stewart:

I quite agree that the Act gives boards power, subject to approval by the Minister of Labour, to delegate to committees various functions including policy-making, and I think this may happen to quite a substantial extent. In the construction industry, for example, which includes building, civil engineering, electrical contracting and heating and ventilation, I expect there will be four committees—in effect, sub-boards—for these different sections. These committees will be given, I imagine, a good deal of autonomy and power to make policy in relation to training within their particular section of the industry. However, I would not have thought it would be appropriate, or desirable, for regional committees to be responsible for making policy. It may be, for example, that if there are variations between different parts of the country about types of training, the main boards would take the advice of their regional committees on that aspect: but I should not have thought, as standards of training laid down are nationwide, that regional committees would decide policy in that sense. As I see it, the regional and local committees' main function will be to see that the policy and standards as laid down by the main board are carried out in their respective region or locale—they would not determine the policy.

Inspection

Is it intended that the Ministry of Labour will have an inspectorate in the same way as the Department of Education and Science? Or will the function of inspection be left entirely to the Industrial Training Boards?

Mr. Stewart:

It is hoped that the majority of firms will co-operate with the boards to achieve the required standard by voluntary effort: but there will have to be some inspection because there will be substantial amounts of Government money involved. The boards themselves will be responsible to firms in the industry to see that they are getting value for the money raised by levy, and I would expect their inspectors to advise the firm on how best to achieve the required standard. There will have to be a small inspectorate by the Ministry of Labour to satisfy itself on what the boards are doing: but prime responsibility will be the boards.

Education

If full-time courses in technical colleges include training as well as education, how would the boards be satisfied that these were of the necessary standard? Would they, in fact, require inspection; would they accept the advice of the inspectorate of the Department of Education and Science, or would they require facilities for their own inspectorate?

Mr. Lowthian:

I would like to see technical training on a full-time basis rather than one day a week. I therefore look forward to an extension of longer periods of technical training apart from normal training, and it should form part of whatever is the period of training in that particular industry.

Mr. Stewart:

Like so many questions, this one is impossible to answer because one is speculating on how non-existent bodies will operate, but I am sure that the more inspection can be reduced the better. It is hoped that the boards would be prepared to rely on the inspectorate of the Department of Education and Science as the only form of control needed.

What form of educational representation would regional and other subordinate bodies assume?

Mr. Pimlott: (*Under Secretary, Department of Education and Science*)

It is taken for granted that on all subordinate bodies, committees or regional boards there will be educational representation where education and training questions arise. Questions of policy are hardly likely to arise on the subordinate bodies, however, for presumably they would not be policy-making bodies but essentially agents of the central board.

Will colleges of further education have some representation on the committees which determine the content of further education courses ?

Mr. Stewart:

Each board will have at least one teacher amongst the educational members, so that the colleges will be represented at the highest possible level within the system—quite apart from the fact that there will be education representation, including again more than one teacher, on the Central Training Council. Secondly, all the relevant committees concerned in training and education will have educational membership, and it is taken for granted that this will include teachers. Thirdly, there is no suggestion in the Act that the control of further education, or the contents of further education courses, should be exercised by the boards—this will continue to be the responsibility of responsible education authorities. However, that is not to say that responsible education authorities will not be anxious to take full account of the view, the advice, and the needs of industry, at present expressed through representation of the City and Guilds of London Institute committees, through advisory committees and, where they exist, by the Industrial Training Boards themselves.

Will the training boards accept the responsibility for ensuring that day release is implemented for those who are eligible ? At present, although two million young people are eligible for day release to attend technical college, only 250,000 *are being released.*

Mr. Pimlott:

The boards will be able to make recommendations concerning day release for boys and girls on recommended courses. The extent to which the boards will take advantage of such power is a matter for speculation, but it would be very optimistic to assume that in the first instance they would recommend the universal grant of day release.

It seems there is an apparent implication that integration of education and training is to apply to everyone except educationalists as far as the Industrial Training Boards are concerned, even to the extent of not being empowered to determine contents of courses, only to recommend the most appropriate of those offered.

Mr. Pimlott:

There must be maximum co-operation between industry and the further education system. At present there is close co-operation, albeit not perfect, between industry and the educationalists. It is exemplified by the City and Guilds of London Institute, which is based upon just that principle; also in the case of authorities and colleges which have adopted the recommendations of the Ministry of Education (as it then was) that there should be strong industrial components in the governing bodies.

There is no reason to suppose that this tradition will not be continued and fortified, particularly under a system which builds-in an educational and industrial partnership on the boards themselves.

As existing technical colleges have not got the space to accommodate all existing work within the conventional run of further education, and as they are existing under conditions where they are starved of capital and revenue, is there any real commitment on the part of the Ministry of Labour or the Department of Education and Science to make available adequate capital and revenue in order that the further demands of the Act will not reflect in such a way as to make technical colleges merely training establishments for industry, rather than colleges for further education which they are at present ?

Mr. Pimlott:

That the technical college system is starved of capital and revenue is a matter of opinion. I think it would be true to say that, on the whole, the technical college system has reasonably kept pace with increasing demands —and I hope it will continue to do so in the future. I would like to quote two figures. First, annual expenditure on further education, not including universities and teacher training colleges, is running at more than £100 million a year, representing an increase of over £10 million a year during the past years. The rate of expansion seems to be going at more than 10 per cent per annum which, if compared with developments in other fields, indicates relatively more expansion rather than the reverse. Secondly, more than £150 million in capital expenditure has been authorised since the 1956 White Paper—that again represents a sizable capital investment.

Training

Will the training boards be competent to deal with management training if they are composed of equal numbers of employer and employee representatives ? It is difficult to see how such a body can competently make proposals regarding management or supervisory training.

Mr. Stewart:

While the Bill was going through, representations were made that the boards would not be suitable bodies to deal with management training, just because they would consist of equal numbers of employers and trade unions. The Minister of Labour would not accept this point for, I think, the following two reasons. First, that the union side, even if not able to make much direct contributions to methods of training, has a lively interest in seeing that good managers are trained because no one is likely to suffer more from the results of poor management than the workers in industry; secondly, as *ad hoc* committees are expected to handle detailed planning of courses and curricula, with representation from the City and

Guilds of London Institute and others who can make skilled contribution, it is presumed they will also be appointed to deal with managerial training —and these committees need not, in fact, contain representatives of the unions for manual and lower-level clerical workers.

The boards are empowered to appoint, for any purpose, whatever committee is most suited to that particular job; the committees can bring in people from outside the board; it is not even necessary to have anyone from the board on the committee. I am quite sure adequate arrangements can be made to produce committees which can make a real contribution in this respect. It may be that the main contribution of the board will be financial—in financing the release of people from industry to take management training. The Ministry of Labour is particularly interested in supervisory training and will do everything possible to encourage boards to see that foremen and supervisors are properly trained.

What is going to be done about the training of technicians ? Technologically and economically they are particularly important at the moment.

Mr. Stewart:

I agree, the training of technicians is of tremendous importance, yet it is one of the most neglected aspects at the moment and one in which there is the most need for rapid expansion. Personally, I feel the boards would want to give their first attention to craftsmen, operatives and technicians, though it has been suggested that the board ought first to deal with management training. It is up to the boards, within limits, to settle their own policies as to priorities of training. Nevertheless, I would have thought, in practice, the boards would first attempt to deal with apprenticeship because this particular section is the most bedevilled by past practices, customs and sometimes agreements. In order to bring training for craft occupation in line with twentieth century thinking, there is need for very urgent attention to that particular group. If a firm has good ideas about management and technical training, there is nothing to prevent putting them into practice—one reason why I feel the boards will perhaps concentrate to begin with on apprentice training. I do not entirely accept that the boards have a responsibility over the whole field and I entirely agree that management, and training for improved management, is of tremendous importance, and also the training of all the technicians that will be needed in a world of rapid technological change.

Chairman: R. G. BELLAMY, OBE, TD

Summing-up

J. G. STEWART, CB, CBE

Under Secretary, Ministry of Labour

In my summing-up there are three main points which I would like to discuss in some detail. The first is arrangements about the levy, the second concerns the scope of the boards; and the third deals with the definition of what constitutes an industry within the meaning of the Industrial Training Act.

Assessment of the Levy

You will notice the levy is precisely one question about which the Industrial Training Act is extemely vague and, quite deliberately, the maximum amount of discretion is left to each board. First, each board must put its levy proposal to the Minister, and only when approved will it come into effect. Even after the boards are appointed, it is going to be quite a substantial period before that stage is reached because the collection of the information on which to base the levy, and the calculation of what it is going to be, will be quite complicated and difficult subjects and will take a good deal of working out.

The amount of the levy will naturally depend on the policies of the boards and the very minimum amount that they could propose to calculate is whatever meets their essential expenditure – including their administrative costs, any direct training which they decide to do themselves, any grants that they make towards training done by firms, teaching colleges and the Government training centres. The sums involved will be considerable; they will be used to re-distribute the cost of training as fairly as possible over the industry as a whole. It is quite conceivable, for example, that a board might decide the right thing to do would be to raise a levy calculated to meet, as far as it could make out, the cost of training in the industry as a whole. This would involve the board in a very substantial re-distribution exercise and, on that basis, the firm that does just its fair share of training – neither more nor less – would presumably get back what it has paid in levy, less what is needed for administrative expenses. Firms that do substantially more will get back more by way of grant than they paid by way of levy, and firms that do little training will get little back, or possibly nothing if their standard of training is unsatisfactory.

Of course, if a board was operating on that last basis, the total amount of the levy would obviously be very substantial and would be a very considerable item on the firms' accounts; but on the other hand, firms would, if they do their duty, be in a position to have a substantial part of the levy returned. I believe that the amount of the levy will be quite substantial because I feel this element of re-distribution, of seeing that the costs are more fairly borne than they are at present, is one of the essential functions which the boards have got to carry out. To do this, the boards will quite clearly need fairly substantial staffs to deal with the assessment of levy on individual firms, to pay out the grants, and so on.

Regarding the nature of the levy itself, I feel the most probable basis is that a board will recommend just so much per head for everyone employed in the establishment concerned: but they would charge variable rates; a higher rate for skilled employees and a lower rate in relation to un-skilled. Or they could base the levy on a totally different principle altogether. The existing levy in the cotton industry, for the support of the Cotton Board, is based on output. There is nothing in the Act to prevent a board proposing a levy on that basis, although one would think that in an Act related to training – to the number of employees to be trained – it would be more natural to relate the grant to the number of employees rather than to actual output.

As you know, there is a provision in the Act for appeals by firms who consider that either they are outside the scope of the board altogether and should not have been assessed or, alternatively, they have been charged more than is proper on the board's basis of assessing levy.

This is all I can very well say on the levy at this stage because it does depend on the boards and the kind of plans they feel are appropriate for their industry.

Scope of the Boards

From the beginning these have been the most difficult problems for the Minister of Labour, both in planning the Bill and now in administering the Act. There would have been quite a lot to be said, of course, for a national system with a national uniform levy and some kind of national body to control training over the whole range of industry; and this was quite seriously considered before the Bill was introduced. We had a particularly close look at the system in France, which is a nationwide system – although there are individual committees in each industry to advise on the administration of the system and its application to that industry – but the French have the benefit of an existing tax to which an extra percentage can be added easily to cover the boards: there is nothing quite comparable in this country. After a great deal of consideration it was decided it was not really possible to proceed on a national-system basis. In consequence we decided to consider an industry by industry approach. Some of you will remember the very interesting talk given by Lady Williams at the BACIE Spring Conference, 1962* on the principle that each industry should be responsible for its own organised training – and that is the way the Act has been composed. Of course it has obvious disadvantages. Ideally one would like to approach training on an occupational basis because the actual training for the individual is training for an occupation, but it was thought impossible because it has to be organised through employers, and employers belong to industries not to occupations. So, though we have adopted the industry-by-industry basis approach, we are trying to apply it in a way which will get a little nearer the occupational approach than just an absolutely straight application by industry without regard to other factors.

Definition of Industry

The basis of the definition of industries is that an establishment which is engaged in engineering, for example, is, on the face of it, within the scope of the Engineering Board. It is subject to levy by that Board, and will be expected by that Board to be guided by its recommendations concerning training arrangements. But since the levy is on an establishment basis, it does follow that the larger firms will eventually be responsible to a considerable number of different boards. It further follows that if, for example, you consult the London Telephone Directory you will find that, under Express Dairies Ltd, there are listed four establishments which are apparently maintenance establishments – one for building and the other three for engineering. It may be that, in due course, if we set up a board for the food distribution industry the Express Dairies will be under that board and those establishments that I have mentioned will be under the Engineering Board. But what we cannot bring under the Engineering Board are the substantial number of workers who are scattered throughout all industries doing maintenance of machinery but who are not in sufficiently large groups to form separate establishments; these people will be under the board for the industry to which their firm mainly belongs. It is this, I believe, which is going to cause a certain amount of difficulty in the early days. We do hope, however, that in the future, when a network of boards is established, other boards will consult with the board which is mainly responsible in relation to training for that group of employees. If, say, a chemical industries board had a substantial number of engineering workers within its scope, we would expect that board to consult the Engineering Board and, as far as possible, follow the Engineering Board's recommendations in the standard of training adopted for their engineering employees. A specific provision in the Act would enable, for example, the chemical industries board to arrange with the Engineering Board to undertake training of those people on behalf of the chemical industries board and to be re-imbursed by that board for the training undertaken. That is the general basis on which the Act has been constructed.

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*Industrial Training – Whose Responsibility? BACIE Publications, price 5s (7s 6d non-members)

There is another group of employees about which we have been considerably concerned because they are common to the whole of industry; I have in mind particularly the commercial and clerical occupations. It seems to me that it is quite impossible to have a board for commerce as such. We could have a board, for example, for the banking and insurance industries but obviously they would not cover anything like the full range of commercial and clerical employees. Instead, what we have in mind is that the Central Training Council might set up a committee to deal with those occupations and establish standards for them. We would then hope and expect that the other boards would adopt those standards and see that the firms in their industries complied with them.

Referring to the question about demarcation between the Ministry of Labour and the Department of Education and Science, I would say there is no clear division between industrial training and technical education although, at one end of the spectrum, there are some things which are clearly industrial training – in the sense of the sort of practical experience which has normally been given in industry – and equally at the other end the kind of theoretical education related perhaps to industrial processes which has always been the responsibility of the technical education system. I hope, however, that under the arrangements provided under the Act there will be very good and satisfactory co-operation – for example between the boards and technical colleges, for there is provision for representation of the technical colleges on the boards.

There has been extremely close and cordial co-operation in the preparation of the White Paper and the Bill between the Ministry of Labour, the Department of Education and Science and the Scottish Education Department, and we have every intention of continuing this close liaison.

We are very well aware in the Ministry of Labour of all the very valuable work which has been done by The City and Guilds of London Institute in the development of curricula for a great variety of courses for technical education. We do recognise that The City and Guilds, and also the regional bodies which concern themselves in various areas with the establishment of courses for technical education, have a very substantial contribution to make in this field. We would expect the boards to see that these bodies are represented on the committees which are to be set up, so that the contribution which these bodies have been making to technical education and industrial training will be continued and developed.

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Printed for the Publishers, The British Association for Commercial and Industrial Education
by Frank Juckes Ltd , Stratford Street North, Camp Hill, Birmingham 11

VT 005 646
The Trained Dental Assistant, Facts for Counselors. Publication No. 1004.

Public Health Service (DHEW), Washington, D.C. Div. of Dental Health
MF AVAILABLE IN VT-ERIC SET.
The Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 ($.15).
Pub Date - Sep65 9p.

*OCCUPATIONAL INFORMATION; *DENTAL ASSISTANTS; *HEALTH OCCUPATIONS EDUCATION; *RESOURCE MATERIALS; SECONDARY SCHOOL COUNSELORS; *OCCUPATIONAL GUIDANCE

The dental assistant assists in chairside activities and office management. Training programs range from less than one year in length to two years and are located in dental colleges, junior colleges, and vocational schools. The document includes detailed information on the nature of the work, trends and outlooks, qualifications, training centers, licensing requirements, earnings, pensions, conditions of work, and sources of supplemental information including pamphlets and a career film. (JK)

VT005646

ED033 237

The Trained Dental Assistant

FACTS FOR COUNSELORS

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

PUBLIC HEALTH SERVICE

VT005946

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Division of Dental Health
Washington, D.C. 20201

Public Health Service Publication No. 1004
Revised September 1965

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C., 20402 - Price 15 cents

The Trained Dental Assistant

FACTS FOR COUNSELORS

Background

THE TRAINING OF DENTAL assistants in colleges and technical schools is a recent development. In the past, a dental assistant received on-the-job training from her employer. Dependence on such training, however, does not meet modern needs. Not only is it too slow and uncertain, but many dentists do not train their assistants beyond routine duties. As a result many dental assistants today are not utilized to their full potential.

Recent studies show that by using an assistant effectively in a two-chair office a dentist can almost double the number of his patients. A trained assistant can demonstrate her economic value from the very outset of her employment.

The urgency for trained dental assistants stems from the shortage of dentists (1 dentist for every 2,100 persons). Not only are the population and the demand for dental service growing far more rapidly than dentists are being trained, but a larger percentage of the total population is seeking dental service today than ever before. To meet adequately the needs for the future, dental colleges would have to begin now to double the number they graduate annually. By increasing the efficiency and quantity of service provided by the dentist, the trained assistant can aid in alleviating the current shortage of dental manpower.

Nature of Work

A trained dental assistant divides her work between (1) assisting in treatment duties and (2) office management. Her primary function is assisting at the chairside where she plays an active and integral role in dental procedures. For example, she prepares patients for treatment, sets out instruments in the order they are to be used, checks equipment, sterilizes instruments, keeps an inventory of all materials used, and orders new supplies as needed. She does laboratory work, such as making study models of teeth and casting inlays, thus relieving the dentist of much time-consuming work. Her duties include exposing and processing of X-rays and mounting of the radiographs in the proper holder.

During treatment she keeps the operating field clear, mixes filling materials and dental cements and passes these materials and instruments to the dentist as he needs them.

As office manager she acts as receptionist, schedules appointments, keeps accounts and records, sends out bills and is responsible for the general appearance of the office.

Number of Workers Engaged

The American Dental Association reports that, as of May 1962, nonsalaried dentists employed about 84,000 full- and part-time dental assistants.[1]

According to "The Survey of Dentistry," [2] about 90 percent of the dental assistants in the country were employed by two-thirds of the private dentists. The remainder worked in hospitals of the Public Health Service and the Veterans Administration, in local public health departments or private clinics, or in the armed services.

Most currently employed dental assistants are trained on-the-job. While the number of formal training programs is rapidly increasing, only a small fraction of dental assistants have had technical school or college training. (This is not the case with dental hygienists who complete a basic 2-year collegiate program and are licensed to practice by State dental boards. The primary duties of hygienists are cleaning teeth and instructing patients in oral hygiene practices.)

Distribution

The demand for dental assistants in any specific area is dependent on the number of dentists in that area. A geographical distribution of dentists by States is located in the appendix.

Trends and Outlooks

The demand for trained dental assistants is greater than the supply. The growing shortage of dentist coupled with the increasing demand for dental service is making the need for assistants more acute.

Dental colleges are teaching their students how to use trained dental assistants effectively. Most young dentists entering practice are eager to secure the service of an assistant who has had technical chairside training.

Also, dentists with an established practice are discovering the economic advantage of employing a trained assistant.

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[1] The 1962 Survey of Dental Practice, American Dental Association, Chicago, Ill.: 1963.

[2] The Survey of Dentistry, American Council on Education, p. 513, Washington, D.C.: 1961.

Age

Dental assistants may be anywhere from 18 to more than 60 years old.

Physical, Mental, Personality Qualifications

A pleasant personality is essential in dealing with the dentist's patients. The assistant should be neat, clean, and healthy, have poise and self-control.

She should have more than average intelligence, be able to meet people and put them at ease. She should have a good command of language and be able to express herself clearly and pleasantly.

Naturally, ability to work quickly and deftly with her hands is extremely important for effective performance at the chairside and in the laboratory.

General Education

A young woman planning to become a trained dental assistant will find that a general business program in high school will equip her for the office management duties. Courses in mathematics, bookkeeping, and typing will be particularly useful. If biology and chemistry courses can be included in her curriculum, they will also be helpful.

Training Centers

Many dental colleges, junior colleges, and vocational schools now offer courses in dental assisting—with their number expected to increase rapidly over the next several years.

Junior colleges offer 1- and 2-year courses, the latter giving the prospective assistant both a broad academic foundation as well as specialized training in dental assisting. Some of the junior colleges award an associate arts degree upon completion of the 2-year program. Courses of 1 year or less concentrate on the more technical aspects of dental assisting.

A current list of schools and colleges offering dental assisting in their curriculums may be obtained from the American Dental Association, 222 East Superior Street, Chicago, Ill.; The American Dental Assistants Association, 410 First National Bank Building, La Porte, Ind.; or the Division of Dental Health, U.S. Public Health Service, Washington D.C., 20201. Some of the schools and colleges are tuition free, and scholarships are available in a number of others.

Licensing Requirements

There are no licensing requirements. The American Dental Assistants Association accords a certificate of "Certified Dental Assistant" to candidates who successfully pass an examination and fulfill experience requirements. The examination may be taken upon completion of the training. Certificates are awarded to dental assistants who have had 1 year of practical experience in a dental office and have completed a 2-year training course in an accredited school or college; or when they have 2 years of practical experience and have completed a 1-year course in an accredited school.

Methods of Entering Occupation

Schools and colleges offering courses in dental assisting have a placement service and ordinarily there is no difficulty in placing graduates in acceptable jobs. The American Dental Assistants Association is also active in placing qualified assistants.

State and private employment agencies provide channels for placing the trained assistant. Family dentists, the local dental assistant association, the local dental society, and dental schools can offer helpful suggestions about employment opportunities.

Earnings

A dental assistant's salary range is dependent on several factors. Amount of special school or college training, length of practical experience, and geographic location must all be considered in determining salaries. Starting salaries for most trained dental assistants range from $250 to $325 a month to a potential of about $475 a month.

In Federal Government (Public Health Service and Veterans Administration) a dental assistant may start at Civil Service Grade 2 at $3,680 a year and with periodic promotions may go as high as Grade 5 at $5,000 to $6,485 a year.

Pensions

There is no organized pension system for dental assistants. A dental assistant can obtain coverage under social security, but unless she works in an office that is subject to State unemployment tax, she cannot draw unemployment benefits.

Nonmonetary Rewards

A dental assistant derives prestige and satisfaction from the semiprofessional status of her work and her association with professional people. Furthermore, as a member of a health team she is making a real contribution to the health and well-being of the individual and the community.

Conditions of Work

The assistant usually works 40 hours a week.

Employment is on a year-round basis. An annual 2-week vacation with pay is a normal arrangement.

Annual leave for Federal Government employees begins at 13 days and reaches 26 days after 15 years of employment. Sick leave is provided on the basis of 4 hours every 2 weeks of work.

Organizations

Dental assistants may become members of the American Dental Assistants Association. There are no specialty organizations or unions.

Supplemental Information

"Something New in White," a pamphlet published by the Division of Dental Health, U.S. Public Health Service, Washington, D.C., 20201 (available upon request).

"The Dental Assistant," a monthly magazine published by the American Dental Assistants Association, 410 First National Bank Building, La Porte, Ind., 46350, $3 per year.

"This Could Be You—A Trained Dental Assistant," a pamphlet published by the American Dental Assistants Association, 410 First National Bank Building, La Porte, Ind., 46350, $3 per 100 copies.

"Juliette A. Southard Scholarship Pamphlet," a pamphlet published by the American Dental Assistants Association, 410 First National Bank Building, La Porte, Ind., 46530 (single copies available upon request).

Films

"The Dental Assistant—A Career of Service" (16mm, sound, color) produced by the Division of Dental Health, U.S. Public Health Service. The film may be borrowed from State health departments, selected State university film libraries, and the Communicable Disease Center, U.S. Public Health Service, 1600 Clifton Road NE., Atlanta, Ga., 30333.

APPENDIX

Distribution of Active Nonfederal Dentists in 1963

	Number		*Number*		*Number*
Alabama	**921**	**Kentucky**	**961**	**North Dakota**	**227**
Alaska	**57**	**Louisiana**	**1,053**	**Ohio**	**4,074**
Arizona	**503**	**Maine**	**352**		
Arkansas	**503**				
				Oklahoma	**811**
		Maryland	**1,182**	**Oregon**	**1,194**
California	**8,726**	**Massachusetts**	**2,948**	**Pennsylvania**	**5,710**
Colorado	**930**	**Michigan**	**3,682**	**Rhode Island**	**411**
Connecticut	**1,562**	**Minnesota**	**1,941**		
Delaware	**160**				
				South Carolina	**466**
		Mississippi	**552**	**South Dakota**	**246**
Dist. of Columbia	**616**	**Missouri**	**1,856**	**Tennessee**	**1,365**
Florida	**2,154**	**Montana**	**321**	**Texas**	**3,106**
Georgia	**1,014**	**Nebraska**	**716**		
Hawaii	**398**				
				Utah	**531**
		Nevada	**129**	**Vermont**	**150**
Idaho	**298**	**New Hampshire**	**251**	**Virginia**	**1,353**
Illinois	**5,147**	**New Jersey**	**3,464**	**Washington**	**1,765**
Indiana	**1,816**	**New Mexico**	**258**		
Iowa	**1,265**				
				West Virginia	**589**
		New York	**11,758**	**Wisconsin**	**2,048**
Kansas	**826**	**North Carolina**	**1,241**	**Wyoming**	**145**

SOURCE: Health Manpower Source Book Section 18. Manpower in the 1960's. Public Health Service Publication No. 263, U.S. Department of Health, Education, and Welfare, U.S. Government Printing Office, Washington, D.C., 20402. 1964, p. 45.

U.S. GOVERNMENT PRINTING OFFICE: 1965 O—790-043

Sources of Information

See local telephone book and index of yellow pages for

- Dental Assistants Society
- Dental Society
- Health Department (Dental Section)
- School for Dental Training

American Dental Assistants Association
410 First National Bank Building
La Porte, Indiana 46350

American Dental Association
222 East Superior Street
Chicago, Illinois 60611

State Health Department (Dental Director)

Division of Dental Health
Public Health Service
U.S. Department of Health, Education, and Welfare
Washington, D.C. 20201

Public Health Service Publication No. 1004
(Revised September 1965)

VT 005 740
Devore, Paul W.
Technology, An Intellectual Discipline.

American Industrial Arts Association, Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
American Industrial Arts Association, 1201 16th Street, N.W., Washington, D.C. 20036.
Pub Date - 8p.

*INDUSTRIAL ARTS; TECHNOLOGY; *INTELLECTUAL DISCIPLINES; *EVALUATION CRITERIA; FUNDAMENTAL CONCEPTS; *EDUCATIONAL PHILOSOPHY

Each industrial arts teacher is essentially engaged in the study of technology, a common endeavor of all mankind. Some are concerned as to whether or not this field can be identified as an intellectual discipline. If it can be so identified it will be more readily acceptable and necessary in the education of all youth. Any discipline has a tradition, a history, a body of knowledge which has gained acceptance by scholars, an organized structure, and a theoretical base. It must address itself to significant problems of man and society, and relate to man and the future. There is evidence that industrial arts is a discipline provided its foundation is technology and applied science. Technology is a dynamic and vital force because man does not accept known answers as absolute or as fixed entities. It has undergone recent revolutions in four areas: the substitution of materials through chemistry, improved criteria used in industrial standards and specifications, improved methods of materials processing, and developing systems of energy supply. However, the organization or structure of its body of knowledge has not been shown. Such a structure can be organized into major instructional or core areas as: the construction industries, communication industries, manufacturing industries, transportation industries, research and development industries, the organization and management of work, crafts, and services. (EM)

VT005 740

ED033 237

TECHNOLOGY

AN INTELLECTUAL DISCIPLINE

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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PAUL W. DE VORE

VT005740

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He has been a member of the Oswego faculty since 1956 and director of industrial arts since 1960.

Technology: An Intellectual Discipline was written following the preparation and presentation of a new course of study entitled: Man and Technology.

TECHNOLOGY:

An Intellectual Discipline

Each industrial arts teacher is engaged in an area of educational endeavor of considerable significance to mankind. He is essentially engaged in the study of technology, a common endeavor of all mankind.

As a field of education industrial arts has appeared on the scene rather late. And as it is with any learning situation, the field of industrial arts has had its share of confusion in direction and understanding. It is known, however, that the road to true understanding has many side trails and much time is spent in sorting the essential from the trivial. The past experience of students and scholars provide some direction and understanding. They have shown that through study, effort and the essential ingredient of time a developing discipline area ultimately arrives as the point of synthesis, of putting things together in proper order. When this stage is reached the students of the discipline are able to view the perimeter with perspective.

The task then is to explore the field of industrial arts and its foundation, technology, and attempt to determine if this area of study has arrived at the point of synthesis. Has this area of study arrived at that place in history in which the study of technology can be indentified as an intellectual discipline? If this is true perhaps the direction for which the profession has been searching will be evident.

The question may well be asked, "Why be concerned with the identification of an area of study as an intellectual discipline?" There is only one suitable reason. A subject area so identified meets certain stringent criteria established by others and takes its place as an area of study essential to an understanding of man and his world. By becoming an intellectual discipline an area becomes accepted as a necessary and contributing study in the education of all youth.

What are these stringent requirements? What is an intellectual discipline? Several sources provide the answer. The term itself indicates an intellectual discipline relates to the intellect and understanding. It involves mental activity and is developed by instruction.

However, this is merely a definition. Shermis[1] analyzes an intellectual discipline on the basis of tenets or principles. Reflection on the tenets cited by Shermis, together with other reading and analysis of subject areas classed as intellectual disciplines, discloses criteria useable in making a judgement.

A discipline worthy of the name has a tradition, a history, from which a body of knowledge has stood the test of time and gained acceptance by the fraternity of scholars. A relationship between the past and present has been established. The knowledge is organized. It has structure. It has been objectively determined. It can be verified by various agreed upon methods. Every man can share in its understanding.

The body of knowledge has durability. Each new discovery or synthesis provides for new insights upon which to build further understandings. The knowledge is cumulative in nature. There is unity between the specialized parts of the structure.

According to Shermis another criteria of an intellectual discipline is whether it addresses itself to problems of imminent significance to man. Does the area attempt to answer significant questions? Have tools and technics been developed for answering the questions? Are the problems considered by the discipline area of significance to man and his society?

A discipline worthy of the name has another trait. It works from a theoretical base. It deals in ideas and concepts and not in creeds and dogmas. There is a rationale or method of dealing with concepts and solving problems. As new knowledge and information is accumulated and assimilated, a true discipline meets the challenge of change through changes in its basic assumptions, concepts and theories.

A closer look at a true discipline discloses an intimate link between the discipline area and man's intellectual, biological, physical or emotional side of life. It is in some way related to man's activities and his aspirations.

Furthermore, a true discipline relates to the future. Man is provided a means of furthering his ideals and of reaching his goals. It provides stimulation and inspiration to man. And most significant of all a discipline relates to men, prominent men, eminent men, men of ideas, men who have made significant contributions through their work, ideas and concepts to the development of the intellectual discipline.

Does the field of study called industrial arts meet these criteria? There is evidence it does, provided it is agreed that technology and applied science serve as the foundation for this subject area and that those engaged in this field or study divorce themselves from such transient considerations as crafts, trades, handicrafts, purely manual skill, materials, or isolated processes. Many of the questions in these areas are not of vital significance to man.

A review of the background of technology will provide prospective to the consideration.

Precious little time is spent in a review before the significance of technology is discovered. One finds it to be a very human thing because it deals with man and man created it. Man applied his early experience and observations to creating technics which enabled him to survive in his various environments on this earth. His whole present and future were tied to technology. And this is more so today.

Through his mental powers, coupled with his unique biological and physical make-up, he developed and expanded his technical knowledge. He created a vast storehouse of technics. And as he created these technics he changed his way of life; for technology forced change in both his institutions and in his self. His economy changed. His social life changed. Man himself evolved. His technology provided for a division of labor and a structured society. Man looked at himself differently because of technology. His conception of time, space, and distance evolved and changed as his methods of transportation and communication developed and became more sophisticated.

The body of knowledge man created about his technology changed man both intellectually and psychologically. His hopes and fears of the future were tied closely to his creation, technology.

Through his technology he gained power. As he built his technology man learned to deal in ideas and concepts. And as his knowledge and understanding grew he discovered means of dealing with his technological environment and its problems.

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[1] Sherwin W. Shermis, "On Becoming an Intellectual Discipline," *Phi Delta Kappan*, XLIV (November, 1962), 84.

Man developed a rationale, a method of solving his problems. Postulation, deductive reasoning, empirical verification, inferences, proof and discovery were found to be methods of dealing with technological concepts.

Through technology man became free. He became master of his own future. And in doing so he has created, through technology, some of his greatest intellectual achievements, achievements which were seldom noted as such because of the great preoccupation with certain other discipline areas such as music, art, literature and politics. In terms of importance, however, man's technological achievements were and continue to be equal to and in many cases surpassing achievements credited to the other disciplines. It has been stated that the greatest intellectual achievements of man were, (1) the discovery of tools, (2) the discovery that one tool could be used to make another tool, (3) the discovery of agriculture and the cultivation of plants, (4) the industrial revolution and (5) the industrial-scientific revolution.

Until recent times this discipline area received little attention. For years men, eminent men, were building the knowledge, developing the concepts and changing history without cognizance of the recognized scholars. Little was recorded of the eminence of this discipline area. Most of its developments occurred between the significant events as outlined in the recorded history. Man's technology was developed in the quiet time between wars, uprisings, revolutions, governmental changes, population shifts, exploration, migration, and abstract events such as the renaissance, reformation, restoration, enlightment, the Northwest Ordinance and the Homestead Acts.

It was between these events that truly significant developments were taking place. Developments such as the magnetic compass, paper making, printing, gunpowder, the wheel, irrigation and water supply systems, sanitation, electricity, the clock, gears, pulleys, water wheels, telescope, microscope, steam engine, ships, bridges, automobiles, the telegraph, the telephone, radio, television and atomic energy. And this quiet revolution continues today with significant consequence to man. Today man's creations in technology are forcing a re-evaluation of his basic concepts and even his way of thinking.

Significant among the recent developments in technology are revolutions in four areas. And it is safe to say that even these revolutions in the discipline have occurred, been assimilated and passed unnoticed by the majority of the scholars and lay people of our time. The first revolution of considerable magnitude has occurred in the very material foundation of industry where the application of chemistry enables extensive and flexible substitution of materials in field after field. The second revolution has taken place in the criteria used in the standards and specifications of industry. These significant developments enable man to determine objectively requirements for the selection of the best methods, the best processes, and the best material in order to provide adequate performance of each and every material, machine, component, process and finished product.

The third revolution has occurred in the materials processing methods of industry. This achievement results from the development of the concept of automation coupled with the electronic revolution in computer technology which have been combined to produce an entire new system called cybernation.

The fourth revolution altered the entire concept of systems of energy supply. This resulted from the development of atomic energy which provides all men of all nations with a truly flexible source of energy.

Building upon his knowledge of technology in a cumulative way man has unified and linked his technology into a component whole bordering on almost total automation by developments in transportation and communication. He has utilized the developments in the four recent technological revolutions, together with developments in transportation and communication, until today we find individually automated plants in widely separated geographical areas linked and unified into one system producing in effect total automation.

The silent revolution created by man by the application of his intellect to environmental problems has been facilitated by his realization of the significance of theory. Man discovered that a theory was a tool to be used to reach a new goal or explore a new concept and then to be discarded when it failed to provide progress or direction for the solution of problems. Man became different intellectually. He cast aside creeds, narrow definitions, matters of opinion, and dogma as unsatisfactory, since they closed the circle of consideration and did not facilitate development of the primary resource, technology.

Technology today is a dynamic and vital force because man did not accept known answers as absolute or as fixed entities. He accepted technology as a vital resource necessary for his survival and addressed himself to the solution of the questions and problems of cardinal significance.

He recognized the area of technology as an on-going process and not as a fixed entity; as a force capable of affecting the life of every human being on our earth in a positive and beneficial way.

Technology: An Intellectual Discipline

With this brief review of the background of technology the final task is to explore the concept of technology as an intellectual discipline on the basis of certain distinct criteria.

A review of the previous analysis shows we have established the following criteria as being essential elements of an intellectual discipline. An intellectual discipline:

1. has a recognizable and significant tradition, an identifiable history.
2. has an organized body of knowledge which has a structure with unity among the parts. The knowledge has:
   a. been objectively determined by verifiable and agreed upon methods,
   b. stood the test of time thereby evidencing durability,
   c. been found to be cumulative in nature, and
   d. deals in concepts and ideas from a theoretical base.
3. is related to man's activities and aspirations and becomes essential to man by addressing itself to the solution of problems of paramount significance to man and his society,
4. identifies as a part of its tradition and history a considerable achievement in both eminent men and their ideas, and
5. relates to the future of man by providing the stimulation and inspiration for man to further his ideals and to reach his goals.

To determine if the field of industrial arts, as an area of study based upon technology, meets the criteria, we need to determine if the essential elements are present and can be identified.

I. A Recognizable and Significant Tradition; An Identifiable History

This criterion is easily attained. Man's whole civilization is based upon his technology. Without it this defenseless creature could not have survived and progressed. From the dawn of civilization man has developed his technology to master his environment. The potential of technology has challenged him. And we find his technological history recorded in such works of literature as *Man the Maker* by Forbes, *History of Technology* by Singer and others, and *History of American Technology* by Oliver.

II. An Organized Body of Knowledge

Today the body of knowledge in the technologies has reached a true universalism. It has permeated our industrial way of life to the extent that there is a universal sharing of like points of view, like disciplines, like reference to objectively valid criteria and like modes of making judgments. The construction and layout of industrial plants, the utilization of transportation and communication networks, the operation and control of industrial processes, the analysis and solution of problems and even the training and preparation of the workforce are evidence of a universalism, of an organized and objectively determined body of knowledge.

The technical and conceptual tools necessary for dealing with the body of knowledge have been developed. It is a discipline of international proportions. Regardless of nationality the body of knowledge is added to by men utilizing similar theories, similar concepts and similar technics to produce identical or complementary inferences, proofs, discoveries and developments.

III. Related to Man's Activities and Aspirations and Addresses Itself to the Solution of Significant Problems of Paramount Significance to Man and His Society

Few other areas of endeavor by man are so intimately related to his activities and aspirations. Today, wherever we look technology is attracting overwhelming interests and commanding the attention of the peoples of all nations. Technology has become one of the indispensable keys to success in defense and war, to the realization of the hopes of the mass of people in underdeveloped countries and to the eventual success of the freedom of men and his democratic institutions. Diplomacy backed up by the newer technologies may well achieve what man has strived towards for centuries. It may well force man to live in peace, a goal of good men of all times.

The present revolution in industry has become so dramatic and far reaching that the understanding of this technological creation of man is one of the most important and pressing needs of contemporary time. And perhaps this will be the greatest challenge of education in all times.

All men share this true universalism of modern times. Technology has become the common denominator from which all people may draw the knowledge and devise technologies upon which the material fates and fortunes of all mankind, in some unidentified way, seem to center.

All men share a common ground and their future hopes and aspirations are linked to the present endeavors in technical research and development.

A crucial element in this third criterion of an intellectual discipline is that the discipline, as an area of study, must address itself to significant problems. When we consider this aspect we discover that technology plays an interesting dual role. It not only is a useful tool in solving problems, but many of the solutions or developments create other problems requiring solution.

Several problems of significance which can be identified easily to serve as examples are:

1. The Need to Organize Production on the Most Rational, Comprehensive and Technically Efficient Basis Possible.

   The interrelatedness, integration, interdependence, and synchronization of the technological system creates a serious problem which demands an intimate understanding and knowledgeable action if we are to prevent crippling breakdowns of the entire system.

2. The Conservation of our Natural and Human Resources.

   The more limited the natural resources the greater is the necessity of a more rational, economical and efficient industrial organization. Our research must be redirected and technological changes reformulated in terms of the conservation of our resources.

3. Related Closely to Conservation is the Economy of Productive Resources Relating to Labor Costs, Venture Capital and the Growing Economic Strength of Other Developing Industrial Nations.

   Each nation must address itself to this problem. To make best use of the developing technology man must thoroughly understand it economically. Every cost, cost classification, operation, activity or function which is not necessary or needed to make use of our technological "know how" must be identified as unnecessary or dispensable.

4. Problems Relating to Individual and Social Values.

   Technology is a very human thing because man created it. But it creates cultural and social problems which must be understood if man is to attain both order and freedom. In essence the problem is how to have the best of both the technical and the social worlds, how to realize the potentialities of technology without subordinating the ends to the means.

There are many more significant problems to which the discipline of technology could address itself. Suffice it to say that the four used as examples; the technical involving production and conservation, the economic and the social cultural are of great and crucial significance to man and his society and are easily identified as such.

IV. A CONSIDERABLE ACHIEVEMENT IN BOTH EMINENT MEN AND SIGNIFICANT IDEAS

Meeting this criterion seems to be self evident. We need only mention a select few of the many hundreds who have made incalculable contributions to the field of technology. Many names are omitted from the record because the contributions were made prior to recorded history or were considered to be of little consequence at the time.

For the record we can cite men such as Gutenberg, Mergenthaler, Watt, Fulton, Whitney, Bessemer, McCormick, Bell, Maudslay, Nasmyth, Wilkinson, Roberts, Wilkie, Edison, Steinmetz, Ford, Wright, and Goddard. These men contributed ideas and concepts relating to printing, power, production, communications, machine processes, electrical theory, transportation and aerospace.

V. Provides Stimulation and Inspiration for Man to Further His Ideals and to Reach His Goals

During a recent stage in his technological development man made a profound discovery, and in so doing changed himself intellectually. No longer does he ask whether a problem can be solved or not. His only question is how long it will take. Man faces the future with a positive mind. Through his application of scientific theory to the satisfaction of human wants man has constantly opened up new frontiers for the betterment of all mankind. From the dawn of the steam age he has advanced steadily into new worlds, worlds of electricity, the internal combustion engine, powered flight, communications, transportation, research, production, construction, electronics and recently atomic power and cybernation.

Yes, man is stimulated and inspired by the discipline of technology. He looks forward to the new worlds of the future.

The Study of An Intellectual Discipline

It would appear that technology satisfactorily meets the criteria established for an intellectual discipline with one exception. Although we have identified technology as having a body of knowledge we have not shown its organization or structure. Both of these are necessary elements since a discipline by definition is developed by instruction.

An organizational structure is easily identified, however. It is a structure having both durability and continuity and is easily determined by a review of man's major technical endeavors through the centuries of his technological development.

His major areas of technical endeavor identify man (1) as a builder, (2) as a communicator, (3) as a producer, (4) as a transporter, (5) as a developer, (6) as an organizer and manager of work, and (7) as a craftsman.

Using these basic divisions of man's technical endeavors as a structure it is possible to study the discipline of technology and meet the challenge of the future. A study of the structure identifies the fact that there exists external stability and internal flexibility. Both components are necessary for a discipline to meet the challenge of change.

Today the solution of the problems of our society requires an educated citizenry – people knowledgeable about technology, a technology which is distinct and unique in its own right. It is a creation by man which continues to produce revolutionary concepts, ideas and methods as the exponential curve of development becomes ever steeper.

Those engaged in industrial arts education face a challenge. The challenge is simply stated. Educate the youth of today for a culture dominated by technology.

This is the challenge and the opportunity. To accept the challenge and to take advantage of the opportunity industrial arts educators need only address themselves to the study of the organized body of technological knowledge. A structure which in present terminology can be organized into major instructional and core areas such as: the construction industries, the communication industries, the manufacturing industries, the transportation industries, the research and development industries, a study of the organization and management of work and the craft and service industries.

This is the challenge to the industrial arts profession. It is a profession which could be well prepared by its heritage to accept the challenge. As an intellectual discipline it can if it so desires address itself to one of the most significant problems of man.

VT 005 856
Guide for Evaluating State Programs in Community-Centered Post-High School Education.

Education Commission of the States, Denver, Colo.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - [68] 7p.

*EVALUATION CRITERIA; QUESTIONNAIRES; *MEASUREMENT INSTRUMENTS; *COMMUNITY SCHOOLS; *POST SECONDARY EDUCATION; STATE SURVEYS; *PROGRAM EVALUATION

Informed study, analysis, and action concerning provisions for post-high school education is the purpose of this evaluation instrument. Questions concerning elements which authorities in the field generally agree are characteristic of good post-high school educational programs are used to suggest areas of needed improvement. A zero to five rating scale for each of 18 questions is utilized. A total score below ninety indicates a cause for concern and a total score of one hundred and twenty or more indicates a strong program. (DM)

VT005 856

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GUIDE FOR EVALUATING STATE PROGRAMS IN COMMUNITY-CENTERED POST-HIGH SCHOOL EDUCATION

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

VT 005856

EDUCATION COMMISSION OF THE STATES

The *Guide for Evaluating State Programs in Community-Centered Post High School Education* has been prepared for your use in promoting informed study, analysis and action concerning the provisions for post-high school education which have been made in your state.

The 18 questions which make up the Guide are derived from statements about those elements which authorities in the field generally agree are characteristic of good programs of community-centered post-high school education.

The Guide is not intended to provide a basis for comparison between and among states but is intended primarily to promote informed study, analysis, and action within a specific state. Secondarily, it is hoped that by completing the questions contained in the Guide, persons in the states can provide to the Education Commission of the States a bank of current data about community-centered post-high school education.

Use of the Guide requires only that on page 5 you indicate by circling the appropriate number on each scale the extent to which your state meets each criterion. (Please note that there are two answer forms—one is for Commission use, the other for your files.) After each part of each question has been answered, add the circled numbers together. The resultant total gives your state a score which is interpreted on the inside back cover.

Please detach and mail to the Commission the portion of page 5 containing the Commission's copy of your answers. Please make certain that you have indicated the state you represent. You need not identify yourself.

Characteristics of a Sound Community-Centered Post-High School Education Program

1. The community-centered post-high school education program is available to and within reasonable commuting distance of most or all of the people of the state.
2. The program is available to all who wish to study either full or part-time.
3. Over 50 percent of the high school graduates in each major geographic area of the state are involved in some program of post-high school education and these graduates are broadly representative of all the high school graduates in the area.
4. The adults in the program are broadly representative of the total adult population in the area being served by the program.
5. The program is comprehensive and flexible enough that persons may participate in the program more than once for different reasons and have their varying needs adequately met.
6. The cost of such programs is such that the vast majority of the families in the area can afford to take advantage of them.
7. The testing, guidance and counseling program related to the post-secondary education effort is of such a nature that those participating in the program can be assured of adequate assistance in identifying realistic educational goals and selecting program components which will lead to the realization of those goals.
8. The program avoids unnecessary and undesirable duplication of other state and local education services currently being provided.
9. The program is based on extensive data concerning such things as these:
   - (a) The need for community-centered post-high school education
   - (b) An analysis of other educational programs to determine whether maximum use is being made of existing programs by those who desire post-high school education
   - (c) The relationship between existing and proposed post-high school programs to statewide and national needs.
10. The program reflects the broad needs of the state in such areas as these:
    - (a) Economic development
    - (b) Manpower requirements

(c) Cultural development

(d) Social Progress
(providing for the disadvantaged, the unemployed, etc.)

11. The program is related to and integrated with other educational programs in the local area and the states generally.

12. A comprehensive system for continuously evaluating the effectiveness of all parts of the program in an integral part of the post-secondary effort.

13. The level of financial support for the program is such that serious problems are not traceable to inadequate financing.

14. The program makes maximum use of other educational programs available in the immediate area.

15. Various patterns of organization for providing community-centered post-high school education were studied before deciding which pattern to use in our state. Among alternatives considered were these:
    - (a) Community college programs
    - (b) Extension centers of colleges and universities
    - (c) Post-high school programs offered by higher education institutions both on and away from the main campus
    - (d) Area vocational schools
    - (e) Adult education programs offered by public school systems

16. The community-centered post-high school education program in the state is an integral part of the total education program of the state.

17. The community-centered post-high school education program of our state has provided for a continuous flow of information, ideas, and suggestions from such organizations as these:
    - (a) The American Association of Junior Colleges
    - (b) The National Association of State Universities and Land-Grant Colleges
    - (c) The Association of State Colleges and Universities
    - (d) United States Office of Education
    - (e) Departments of Education in other states
    - (f) Adult Education Associations

18. The state consistently takes advantage of federal support programs designed to strengthen community-centered post-high school education efforts.

Extent to Which Criteria Have Been Met by the States

	Not at All	Very Little	to	Extensive		Totally
1.	0	1	2	3	4	5
2.	0	1	2	3	4	5
3.	0	1	2	3	4	5
4.	0	1	2	3	4	5
5.	0	1	2	3	4	5
6.	0	1	2	3	4	5
7.	0	1	2	3	4	5
8.	0	1	2	3	4	5
9. a.	0	1	2	3	4	5
b.	0	1	2	3	4	5
c.	0	1	2	3	4	5
10. a.	0	1	2	3	4	5
b.	0	1	2	3	4	5
c.	0	1	2	3	4	5
d.	0	1	2	3	4	5
11.	0	1	2	3	4	5
12.	0	1	2	3	4	5
13.	0	1	2	3	4	5
14.	0	1	2	3	4	5
15. a.	0	1	2	3	4	5
b.	0	1	2	3	4	5
c.	0	1	2	3	4	5
d.	0	1	2	3	4	5
e.	0	1	2	3	4	5
16.	0	1	2	3	4	5
17. a.	0	1	2	3	4	5
b.	0	1	2	3	4	5
c.	0	1	2	3	4	5
d.	0	1	2	3	4	5
e.	0	1	2	3	4	5
f.	0	1	2	3	4	5
18.	0	1	2	3	4	5

Mail this portion to ECS

Extent to Which Criteria Have Been Met by the States

	Not at All	Very Little	to	Extensive		Totally
1.	0	1	2	3	4	5
2.	0	1	2	3	4	5
3.	0	1	2	3	4	5
4.	0	1	2	3	4	5
5.	0	1	2	3	4	5
6.	0	1	2	3	4	5
7.	0	1	2	3	4	5
8.	0	1	2	3	4	5
9. a.	0	1	2	3	4	5
b.	0	1	2	3	4	5
c.	0	1	2	3	4	5
10. a.	0	1	2	3	4	5
b.	0	1	2	3	4	5
c.	0	1	2	3	4	5
d.	0	1	2	3	4	5
11.	0	1	2	3	4	5
12.	0	1	2	3	4	5
13.	0	1	2	3	4	5
14.	0	1	2	3	4	5
15. a.	0	1	2	3	4	5
b.	0	1	2	3	4	5
c.	0	1	2	3	4	5
d.	0	1	2	3	4	5
e.	0	1	2	3	4	5
16.	0	1	2	3	4	5
17. a.	0	1	2	3	4	5
b.	0	1	2	3	4	5
c.	0	1	2	3	4	5
d.	0	1	2	3	4	5
e.	0	1	2	3	4	5
f.	0	1	2	3	4	5
18.	0	1	2	3	4	5

State ....

Mail to:

Education Commission of the States
822 Lincoln Tower
1860 Lincoln
Denver, Colorado 80203

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Scoring

By adding the numbers which have been circled, you will arrive at a "score" which will provide some information as to the relative position of your state's program for community-centered post-high school education.

A score below 90 is cause for concern. It suggests that a comprehensive look should be taken at the adequacy of the program for post-high school education and that an upgrading of the program is necessary and should be undertaken immediately.

A score of 90-119 indicates some areas of strength but suggests sufficient weakness in the program to warrant a general reappraisal of all program components.

A score of 120 or over indicates a strong program which, except for the usual provisions for periodic evaluation, probably does not need any major revision. States which score in this upper range should be providing leadership to other states as they endeavor to develop quality programs of community-centered post-high school education.

VT 005 872
Jones, Nancy P.
Occupational Information in the Elementary School.

Delaware Occupational Research and Coordinating Unit, Dover
MF AVAILABLE IN VT-ERIC SET.
Pub Date - /68/ 37p.

*OCCUPATIONAL INFORMATION; BIBLIOGRAPHIES; *ELEMENTARY GRADES; *RESOURCE GUIDES; GUIDELINES; *OCCUPATIONAL GUIDANCE; QUESTIONNAIRES; *INFORMATION SOURCES; DIRECTORIES; RESOURCE MATERIALS

This resource paper is intended for the use of elementary school educators. Included are a general discussion of occupational information in the elementary school; a sample questionnaire for use in obtaining information about services and industries in the area of the school; a suggestion sheet to be supplied to speakers presenting occupational information; and an annotated bibliography of books. Also included are listings of the following: (1) recent periodical articles, (2) publishers who produce books and pamphlets that can be used by elementary school children, (3) relevant governmental publications, (4) professional and commercial organizations that provide occupational information materials, and (5) officials of the departments of guidance of all the states with supplementary information on materials recently published by the departments. (JK)

VT005 872

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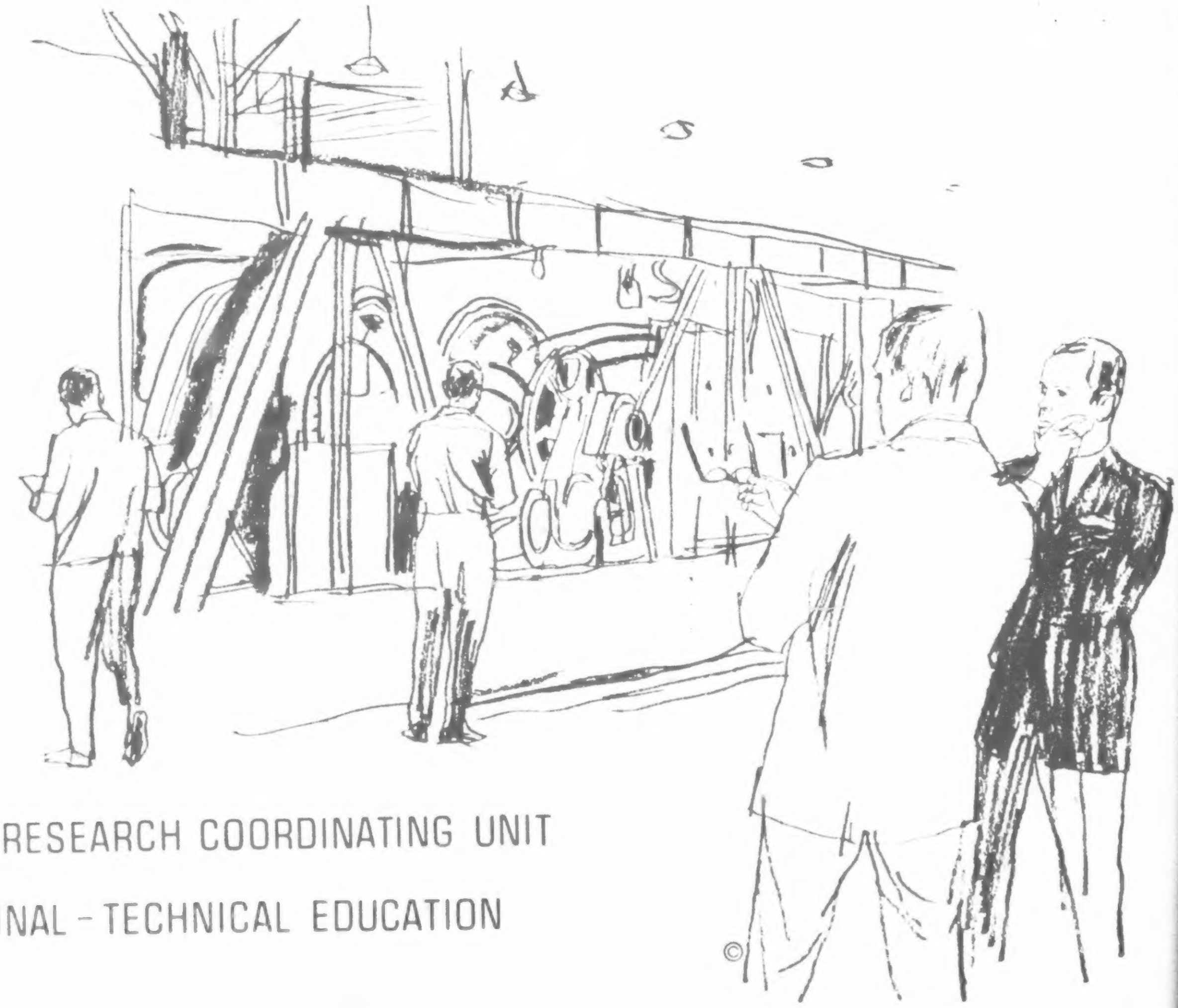
OCCUPATIONAL INFORMATION

In The Elementary School



VT005872

DELAWARE OCCUPATIONAL RESEARCH COORDINATING UNIT

STATE BOARD FOR VOCATIONAL - TECHNICAL EDUCATION

OCCUPATIONAL INFORMATION IN THE ELEMENTARY SCHOOL

A Resource Paper By

Nancy P. Jones

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Distributed As A Service By The

Occupational Research Coordinating Unit
Division of Vocational-Technical Education
Delaware Department of Public Instruction
Dover, Delaware 19901

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FOREWORD

An effective guidance program should provide all students with useful information and meaningful experiences to help better understand themselves and the world around them. In recent years, attention has been focusing on the importance of guidance in the elementary school. The Occupational Research Coordinating Unit supports the concept of a "Total Program of Education", in which guidance has an important role to play. The Unit, therefore, is indebted to Mrs. Nancy P. Jones for her permission to reproduce this resource paper as a service to Delaware educators.

WHERE TO GET MORE INFORMATION

Educators wishing to give more emphasis to guidance are encouraged to make use of the following services and personnel available through the Department of Public Instruction.

Office of Research and Publications: A complete file of ERIC microfiche film cards is available for study of background material on a wide variety of topics, including guidance.

Occupational Research Coordinating Unit: Numerous ERIC microfiche reports and printed materials in occupational information and guidance are available for review.

Staff Personnel:

Mr. G. William Murphy
Supervisor, Guidance
Division of Pupil Personnel
Services
Department of Public Instruction

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Occupational Information
Division of Vocational-Technical
Education
Department of Public Instruction

OCCUPATIONAL INFORMATION IN THE ELEMENTARY SCHOOL

Many people concerned with the education of the "whole" child feel that children need to be presented with occupational orientation concepts in the elementary school. Vocational choice seems to be a developmental process rather than a single choice made at a specific time in one's life. Knapp states that "understanding the world of work, developing appreciation of all kinds of worthwhile work, and eventually fitting one's self successfully into the world of work should be the objective of every boy and girl in the elementary school. Vocational guidance should be introduced early in the school life of the child and be continuous as long as the child remains in school, and even until he is adjusted to some worthwhile vocation for which he has aptitude and interest."[1]

The basic facts of occupational choices should be presented to the child at the elementary level with the hope that the child will be able to draw upon his previous knowledge when he is confronted with vocational decisions in later life. We must try to acquaint children with a wide variety of occupations, and create an awareness that there are many potential possibilities of vocations. The program should begin when the child begins school and be continuous throughout the whole of his elementary school program. By the time a child has reached junior high school level, he has begun to develop prejudices and, consequently, he may not look at the world of work objectively. "Many of today's youth will earn a living in occupations which are presently unknown. Technological changes will force other workers to learn new skills even though they remain on the same job. Therefore, it is not only important for the young person to explore and analyze jobs and job requirements, but he must also learn to adapt himself to job responsibilities."[2] Perhaps future readjustment could be facilitated if the personnel involved had a solid background of knowledge from which to draw conclusions.

---

[1] Robert H. Knapp, Guidance in the Elementary School (Boston, 1959), p. 221.

The inclusion of occupational information in the school curriculum may also serve several other purposes including bringing the school, home, and community closer together, and assisting the child to be more able to look at himself critically. One aim the program should try to foster is the development of salable characteristics in children such as promptness, neatness, self-other understanding, acceptance of responsibility, completion of tasks, and appropriate responses.

There are many ways to approach the development of an occupational information program in the elementary school. It would be impossible to formulate a specific plan for presenting this information to elementary schools everywhere. Each school must analyze its own specific needs and formulate its own program as an integral part of the total curriculum plan if it is to achieve success. However, some general procedures such as the familiar ones listed below can be utilized to enhance learning. Primary level procedures might include:

1. Poems
2. Stories
3. Songs
4. Games
5. Role Playing
6. Dramatization
7. Community Helpers
8. Field Trips
9. Films and Filmstrips

---

[2] Herman J. Peters, Guidance in the Elementary School (Chicago, 1965), p. 53.

Intermediate procedures could include:

1. Research Projects
2. Outlines
3. Individual and Group Projects
4. Field Trips
5. Speakers
6. Interviews
7. Observation
8. Spare Time Activities
9. Films and Filmstrips
10. Recordings

The Arizona State Department of Public Instruction, Guidance Services Division, believes that information about occupations should be of a general nature at the elementary school level. They feel that purposes should be designed to do the following:

1. To make the student aware of the wide variety of workers ranging from the occupations of his parents to community helpers.
2. To assist the student in answering the many questions he may have about occupations.
3. To help the student acquire a broad general knowledge of the world of work.
4. To help the student develop attitudes of respect and appreciation for the various types of work useful to society.[3]

Donald Kitch suggests the following general procedures:

1. The school's program for promoting occupational adjustment should begin when the pupil first enters school and should continue as long as he remains in school.
2. Pupils should be given an opportunity to identify positively with individuals representing a variety of occupations.
3. More effective use should be made of non-reading methods of giving youngsters information about occupations.
4. Parents should be directly involved in educational and occupational planning.[4]

---

[3] *Elementary Guidance Guidelines* (Phoenix: Arizona State Department of Public Instruction, 1967), p. 8.

[4] Herman J. Peters and others, *Guidance in the Elementary School, A Book of Readings* (New York, 1963), pp. 142-143.

Those concerned with education should be especially aware of the fourth concept stated above. Parents do play an important role in the development of their children. They can foster natural curiosity and interests in their children through reading, hobbies, clubs, and many other activities. With the increased educational interest in the culturally and/or educationally deprived child, we see a lack of development frequently in this area. Perhaps the lack of an adequate parent-child relationship with its resulting impact on vocational choice should be considered in the early presentation of educational material on occupational information.

Research seems to substantiate the fact that the deprived child is quite frequently the school "dropout" and is a drifter in the adult world with frequent unemployment. Several authorities in the field of elementary guidance feel there should be special effort made with this type of child at the earliest possible age. Peters states, "There have always been young people who dropped out before finishing grade school or high school. Until recently, however, there were ample unskilled jobs for workers with limited education. Automation and the steadily rising educational requirements for jobs have drastically changed the situation. Today many high school graduates have difficulty finding employment and the youth who leaves with no special skill and a limited education often faces total unemployment."[5] Robert Knapp seems to summarize the view of the authorities when he says, "If this large segment of our elementary school population is to be helped vocationally before leaving school, the help will have to be given while the children are enrolled in the elementary grades."[6] Education must strive to help these children find ways to change and/or modify their environment.

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[5] Peters, op. cit., p. 56.

[6] Knapp, op. cit., p. 223.

It would also be impossible to compile a complete list of all the possible sources of information that could be utilized in presenting occupational information to elementary school children. The following pages contain a partial listing of sources appropriate for use by school personnel.

QUESTIONNAIRE

This is a sample that could be adapted for use by a specific school to obtain information about services and industries within a specific radius of said school.

Dear Sir:

In our elementary school program, we feel that it is important to develop an early awareness in children of the occupational (or vocational) possibilities which exist in the world around them. The following questionnaire will assist us in determining in what way your company or service can help us in this endeavor. Please complete at your earliest convenience and return to the above address.

Thank you for your cooperation.

Company Name (or Service):

Address:

Phone:

Principal Product (or Service):

1. Do you have a business (or service) that could be useful with and understood by elementary school children? What age child?
2. Do you conduct field trips?
    a. During what hours?
    b. Limitations on group size?
    c. Special clothing requirements?
    d. Unusual dangers or hazards?
    e. Admission charge?
3. If you do not conduct field trips, do you have a representative who could come to school to explain your operation or service?
4. Do you provide or would you consider providing a study guide or other similar information to teachers to assist them in helping elementary school students understand your company or service?
5. In looking for future employees, what special requirements for employment do you consider most important?
6. Do you require a personal interview with all job applicants?

7. What salable qualities do you consider important in your service or vocation which the school might endeavor to develop in children?

8. Comments:

SUGGESTION SHEET FOR VOCATIONAL SPEAKERS

This suggestion sheet is one that was devised by the Canton City Schools, Canton, Ohio. It is the outgrowth of an elementary guidance project conducted during the 1966-67 school year. It is felt this might be very helpful in presenting occupational information to elementary children.

I. Present the information at the level the children can understand it. For many of these children the study of vocations is new. They lack experience and knowledge of many areas of work.

II. Do not glamorize the vocation. Always present the barriers to a vocation as well as the advantages. Remember a boy that cannot do eighth grade arithmetic will not be able to do engineering mathematics.

III. Present the vocation in a general area. Specific areas of specialization within a vocation should come later in high school or even in college after additional knowledge, experiences and maturity have been acquired by the student.

IV. These are points that you should cover in your talk about vocations:

a. What does a worker in this vocation do?

b. What are the present opportunities for employment in this vocation? When these children finish high school and other training required, will this still be true?

c. What personality traits are desired? What physical characteristics are needed? Do both men and women work in this vocation?

d. What preparation is required? What will be the cost? Where can it be acquired?

e. What are the working conditions? How does the worker secure entry into the vocation?

f. What does the vocation pay a beginner, an experienced worker? What are the intangible rewards, i.e., service, prestige, etc.?

g. What are the opportunities for advancement?

h. What are the legal requirements? Is a license, certificate, union or professional membership required?

i. What other vocations are related to this one in such a way that change of vocational choice could be made in high school without loss of preparation?

j. What suggestions can you make to the child interested in this vocation so he may secure further knowledge and information.[7]

---

[7] Essex, M. W. Ohio Elementary Guidance, Compilation of Project Abstracts, 1966-67 School Year (Columbus: Division of Guidance and Testing, State of Ohio Department of Education, September, 1967), p. 87.

RECENT ARTICLES IN PERIODICALS

"Attitudes Toward the World of Work in the Elementary School" - J. A. Wellington and N. Olechowski. *Vocational Guidance Quarterly* - 14:160-2 - Spring, 1966.

"Automation, Work and Leisure; Implication for Elementary Education" - G. R. Kaback. *Vocational Guidance Quarterly* - 13:202-6 - Spring, 1965.

"Knowledge and Interests Concerning Sixteen Occupations Among Elementary and Secondary School Students" - R. C. Nelson. *Educational and Psychological Measurement* - 23:741-54 - Winter, 1963.

"Occupational Information for Groups of Elementary School Children" - G. R. Kaback. *Vocational Guidance Quarterly* - 14:160-6 - Spring, 1966.

"Occupational Information in the Elementary School" - D. S. Arbuckle. *Vocational Guidance Quarterly* - 12:77-84 - Winter, 1963-64.

"Occupational Information: Need of American Youth" - P. D. Vairo. *Catholic Educational Review* - 63:468-70 - October, 1965.

"Occupational Interest Survey" - G. F. Kuder. *Personnel and Guidance Journal* - 45:72-7 - September, 1966.

"Vocational Development and the Elementary School" - R. Lyon. *Elementary School Journal* - 66:368-76 - April, 1966.

"Workers in the Community; Study Plan" - M. R. Dinkel. *Instructor* - 76:28- January, 1967.

BOOKS

All of the books listed below are available from the State Department of Public Instruction, Division of Pupil Personnel Services, Dover, Delaware; or from the University Library, University of Delaware, Newark, Delaware.

Baer, Max F. Occupational Information. Chicago: Science Research Associates, Incorporated, 1964.

This book deals entirely with presenting the subject of occupational information to children. It is intended for secondary use, but some sources could be used with elementary children. It has a good list of sources of information including government and other related organizations, and audio-visual materials.

Educator's Guide to Free Guidance Material. Randolph: Educator's Progress Service, 1962.

This book lists 482 free items on career and guidance materials including filmstrips, tapes, pamphlets, charts, and books.

Essex, M. W. Ohio Elementary Guidance, Compilation of Project Abstracts, 1966-1967 School Year. Chicago: Division of Guidance and Testing, State of Ohio Department of Education, 1967.

This publication gives objectives, program, evaluation, and summary of projects including the ones mentioned under the Chio section of the state guidance systems, elsewhere in this paper. Appendix K provides sample units which were developed in the Dayton City Schools' vocational-occupational program.

Forrester,. Gertrude. Occupational Literature. New York: H. W. Wilson Company, 1964.

This is an excellent annotated bibliography of available literature in the field.

Knapp, Robert H. Guidance in the Elementary School. Boston: Allyn and Bacon, Incorporated, 1959.

The useful section of this book is Part 3 - "Guiding Children, Chapter 12" - Vocational Guidance. It discusses programs needed, techniques for provision of vocational guidance, and summary of the area.

Lifton, Walter M. Introducing the World of Work to Children. Chicago: Science Research Associates, Incorporated, 1960.

This is a booklet written for elementary teachers which discusses the subject and methods of presentation to elementary school children. The accompanying student booklet is entitled, What Could I Be?

Norris, Willa. Occupational Information in the Elementary School. Chicago: Science Research Associates, Incorporated, 1963.

This was the only source found specifically dealing with vocational guidance at the elementary level. The book is divided into two parts. The first section deals with the subject in general and gives specific information for use at primary and intermediate levels. The second section contains a good selection of resource materials including books, pamphlets, filmstrips, films, songs, and recordings with appropriate source information and cost. This section is divided into those materials most useful in early elementary grades and those most useful in later grades.

Peters, Herman J. and others. Guidance in the Elementary School. Chicago: Rand McNally and Company, 1965.

Chapter four in part two of this book is entitled "Guiding Elementary Children Toward Vocational Choice".

Peters, Herman J. and others. Guidance in the Elementary School: A Book of Readings. New York: Macmillan Company, 1963.

Part III entitled "The Elementary School Child and the World of Work" contains some of the latest viewpoints of four authors on the subject of the World of Work.

PUBLISHERS

This is only a partial listing of publishers who publish books and/or pamphlets that can be used by elementary school children to obtain vocational information. A complete listing of book publishers, film and filmstrip distributors and producers, and record producers and distributors can be found in Occupational Information in the Elementary School by Willa Norris published by Science Research Associates, Inc., Chicago, Illinois. These excellent listings are divided for use at primary and intermediate levels, and they contain titles, pages, a brief description, and cost of information.

Benefic Press, 1900 N. Narragansett Ave., Chicago, Illinois
Publish useful books for primary age children.

B'nai B'rith Vocational Service, 1640 Rhode Island Ave., N.W., Washington, D. C. 20036
The Counselor's Information Service ($6 per year) - This is a bibliography of current literature on occupations and guidance, issued quarterly.

Numerous other publications available in catalog which will be sent upon request.

Children's Press, 310 S. Racine Ave., Chicago, Illinois.
Publish an excellent series of books for use at primary level entitled I Want To Be __________ and The True Book of __________. There are over 40 occupations covered in the titles; these books average about 30 pages each and are around $2 each.

Coward-McCann, Inc., 200 Madison Ave., New York, New York.
Publish 50 career related books for use by intermediate children at average cost of $2.50 each.

Doubleday and Company, 575 Madison Ave., New York, New York.
Career related books for use by elementary age children.

Golden Press, 850 Third Ave., New York, New York.
Books for use at all levels in the elementary school are available.

Follett Publishing Company, 1010 W. Washington Blvd., Chicago, Illinois.
Publish series of books which primary children can read themselves.

Melmont Publishers, 310 S. Racine Ave., Chicago, Illinois.
Books for use by primary age children which tell about operations "behind the scenes" in such places as the library, museum, clothes factory, circus, dentist's office and many others.

G. P. Putnam's Sons, 200 Madison Avenue, New York, New York.
Publish an excellent series of 55 books entitled Let's Go To The _______ which are for primary use.

Random House, 457 Madison Ave., New York, New York.
Career related books for use by advanced children in upper elementary school.

Science Research Associates, Inc., 259 East Erie Street, Chicago, Illinois.
Publish booklet for teachers' use, Introducing the World of Work to Children, with accompanying pupil booklet, What Could I Be?

Franklin Watts, 575 Lexington Ave., New York, New York.
Publish the series of books entitled The First Book of _________ for use by primary age children.

NATIONAL SOURCES

A comprehensive listing of current materials available from the government, including prices, can be obtained from the Government Printing Office, Washington, D. C. 20402. A partial listing of publications which might be useful at the upper elementary level appears below. All publications are available from the above address unless otherwise noted and are free unless otherwise noted.

Department of Agriculture

Career Service Opportunities in the U. S. Department of Agriculture - also publish numerous Farmers' Bulletins.

Department of Commerce

Directory of National Associations of Businessmen (50¢) - lists 1,900 trade and professional associations.

Bureau of the Census

Catalog of U. S. Census Publications - quarterly publications cumulated to an annual issue. ($1.25 per year) Bureau of the Census, Washington, D. C. 20233.

Department of Defense

U. S. Air Force Occupational Handbook - Headquarters, U. S. Air Force, The Pentagon, Washington, D. C. 20330.

The Occupational Handbook (Army) - Army Careers, U. S. Continental Army Command, Fort Monroe, Virginia.

A Guide to Occupational Training, United States Marine Corps - Commandant of the Marine Corps (Code DPO), Headquarters, United States Marine Corps, Washington, D. C. 20390.

Navy Enlisted Occupational Handbook and Navy Officer's Career Handbook - Office of Information, Department of the Navy, Washington, D. C. 20350.

Department of Health, Education and Welfare

Public Health Service - Brochures and pamphlets on related careers available from: Chief of Information, Bureau of Medical Services, Public Health Service, Department of Health, Education and Welfare, Washington, D. C. 20203.

Vocational Rehabilitation Administration - Publications available on opportunities for working with handicapped, including blind, deaf, tubercular, and epileptics. Vocational Rehabilitation Administration, Department of Health, Education and Welfare, Washington, D. C. 20203.

Department of the Interior

Careers in the U. S. Department of the Interior (25¢)

Department of Labor

Bureau of Apprenticeship and Training - issues a variety of publications relating to apprenticeship for skilled occupations.

Division of Wages and Industrial Relations - information is available on the field of wages.

Occupational Outlook Service - Occupational Outlook Handbook ($1 for four issues per year, single copies 30¢): Occupational Outlook Quarterly - a periodical with up-to-date information on employment trends in major occupations. (30¢): Wall Chart Series - charts for use on bulletin boards which deal with a large number of selected occupations.: Occupational Outlook Publications - a free catalog listing all publications available.

Office of Manpower, Automation, and Training - This office provides speakers and research bulletins dealing with the Manpower Development and Training Act. Office of Manpower, Automation and Training Department of Labor, Washington, D. C. 20210.

United States Employment Service - Dictionary of Occupational Titles (Vol. I - $5.50; Vol. II - $3.00; Supplement - $1.25) This dictionary includes definitions of jobs, determination of code numbers, classification of occupational materials, and a comparison of occupational duties. Numerous other booklets and pamphlets also available.

Department of State

Employment Information (20¢) - a booklet which describes requirements for employment in both national and foreign service.

Independent Federal Agencies

Atomic Energy Commission - Employment Opportunities in the Atomic Energy Field (50¢) Office of Technical Services, Department of Commerce, Washington, D. C. 20230.

National Aeronautics and Space Administration - numerous booklets available free from Educational Services Branch, Office of Educational Programs and Services, National Aeronautics and Space Administration, Washington, D. C. 20546.

Peace Corps - Peace Corps Factbook - Peace Corps, Washington, D. C. 20525.

President's Committee on Employment of the Handicapped - Employment of the Physically Handicapped; A Bibliography (35¢): Jobs for the Handicapped; Program Guide - available from: President's Committee on Employment of the Handicapped, Washington, D. C. 20210.

Small Business Administration - numerous Small Business Bulletins in a series available from: Small Business Administration, Washington, D. C. 20417.

PROFESSIONAL SOURCES

These sources are a selected group of sources from Occupational Information by Max Baer. A postcard request sent to most of the sources will bring free related materials and/or a catalog.

Accountants, American Institute of Certified Public
666 Fifth Avenue, New York, New York 10022

Actors and Artists of America, Associated
226 West 47th Street, New York, New York 10036

Aerospace Industries Association of America
1725 DeSales Street, N. W. Washington, D. C. 20036

Air Transport Association of America
1000 Connecticut Avenue, N. W., Washington, D. C. 20036

Animal Science, American Society of
Department of Animal Science, Oregon State University, Corvallis, Oregon

Archealogical Institute of America
5 Washington Square North, New York, New York 10003

Architects, American Institute of
1735 New York Avenue, N. W., Washington, D. C. 20036

Atomic Industrial Forum
3 East 54th Street, New York, New York 10022

Automotive Engineers, Inc., Society of
485 Lexington Avenue, New York, New York 10017

Aviation Education Council, National
1025 Connecticut Avenue, N. W., Washington, D. C. 20036

Baker's Association, American
12 East 36th Street, New York, New York 10036

Bankers Association, American
12 East 36th Street, New York, New York 10036

Bar Association, American
1115 East 60th Street, Chicago, Illinois 60637

Biological Sciences, American Institute of
2000 P Street, N. W., Washington, D. C. 20036

Broadcasters, The National Association of
1771 N Street, N. W., Washington, D. C. 20036

Chemical Society, American
1155 Sixteenth Street, N. W., Washington, D. C. 20036

Chiropractor's Association, International
741 Brady Street, Davenport, Iowa

City Manager's Association, International
1313 East 60th Street, Chicago, Illinois

Composers, Authors and Publishers, American Society of
575 Madison Avenue, New York, New York 10022

Culinary Institute of America
393 Prospect Street, New Haven, Connecticut

Dental Association, American
222 East Superior Street, Chicago, Illinois 60611

Dental Hygienists' Association, American
100 East Ohio Street, Chicago, Illinois 60611

Dry Cleaning, National Institute of
909 Burlington Avenue, Silver Springs, Maryland

Educational Association, National
1201 Sixteenth Street, N. W., Washington, D. C. 20036

Electrical Engineers, American Institute of
345 East 47th Street, New York, New York 10017

Family Service Association of America
215 Fourth Avenue, New York, New York 10003

Fisheries Institute, National
1614 Twentieth Street, N. W., Washington, D. C. 20009

Florists, Society of American
Sheraton Park Hotel, Washington, D. C. 20008

Foresters, Society of American
704 Seventeenth Street, N. W. Washington, D. C. 20036

Funeral Directors Association, National
135 West Wells Street, Milwaukee, Wisconsin 53203

Gemological Institute of America
11940 San Vicente Boulevard, Los Angeles, California 90049

Geographers Institute, American
2101 Constitution Avenue, N. W., Washington, D. C. 20037

Hairdressers and Cosmetologists Association, National
175 Fifth Avenue, New York, New York 10010

Health, Physical Education and Recreation, American Association of
1201 Sixteenth Street, N. W., Washington, D. C. 20036

Heating, Refrigerating and Air Conditioning Engineer, American Society of
345 East 47th Street, New York, New York 10017

Historical Association, American
400 A Street, S. E., Washington, D. C. 20003

Hospital Association, American
840 North Lake Shore Drive, Chicago, Illinois 60611

Hotel Association, American Educational Institute
221 West 57th Street, New York, New York 10019

Housing and Development Officials, National Association of
1413 K Street, N.W., Washington, D. C. 20005

Insurance Institute of America
270 Bryn Mawr Drive, Bryn Mawr, Pennsylvania

Interior Designers, American Institute of
673 Fifth Avenue, New York, New York 10022

Journalism, American Council on Education for
Indiana University, Bloomington, Indiana

Landscape Architects, American Society of
2000 K Street, N.W., Washington, D. C. 20006

Library Association, American,
50 East Huron Street, Chicago, Illinois 60611

Lumber Manufacturers Association, National
1619 Massachusetts Avenue, Denver, Colorado 20036

Mathematical Society, American
190 Hope Street, Providence, Rhode Island 02906

Medical Association, American
535 North Dearborn Street, Chicago, Illinois 60610

Medical Technology, National Committee for Careers in
1785 Massachusetts Avenue, N.W., Washington, D. C. 20036

Meterological Society, American
45 Beacon Street, Boston, Massachusetts 02108

Newspaper Publishers Association, American
750 Third Avenue, New York, New York 10017

Nuclear Society, American
86 East Randolph Street, Chicago, Illinois 60601

Nurserymen, American Association of
835 Sourthern Building, Washington, D. C. 20005

Nursing, National League for Committee on Careers
10 Columbus Circle, New York, New York 10019

Occupational Therapy Association, American
250 West 57th Street, New York, New York 10019

Optometric Association, American
4030 Chouteau Avenue, St. Louis, Missouri 63110

Patent Law Association, American
National Press Building, Washington, D. C. 20004

Pest Control Association, National
250 West Jersey Street, Elizabeth, New Jersey

Pharmaceutical Association, American
2215 Constitution Avenue, N.W., Washington, D. C. 20037

Physical Therapy Association, American
1790 Broadway, New York, New York 10019

Physics, American Institute of
335 East 45th Street, New York, New York 10017

Police, International Association of Chiefs of
1319 Eighteenth Street, N.W., Washington, D. C. 20036

Poultry Science Association
Texas A. and M. College, College Station, Texas

Practical Nurse Education, National Association for
475 Riverside Drive, New York, New York 10027

Professional Engineers, National Society of
2029 K Street, N.W., Washington, D. C. 20005

Public Health Association, American
1790 Broadway, New York, New York 10019

Public Welfare Association, American
1313 East 60th Street, Chicago, Illinois 60637

Real Estate Boards, National Association of
36 South Wabash Avenue, Chicago, Illinois 60603

Restaurant Association, National
1550 North Lake Shore Drive, Chicago, Illinois 60610

Sanitary Engineering, American Society of
4716 Ewing Avenue, South, Minneapolis, Minnesota

Scientists of America Foundation, Future
1201 Sixteenth Street, N.W., Washington, D. C. 20036

Secretaries Association, National
1103 Grand Avenue, Kansas City, Missouri 64106

Social Workers, National Association of
95 Madison Avenue, New York, New York 10016

Tool and Manufacturing Engineers, American Society of
10700 Puritan Avenue, Detroit, Michigan 48238

Traffic and Transportation, American Society of
22 West Madison Street, Chicago, Illinois 60602

Trucking Association, American
1616 P Street, N.W., Washington, D. C. 20036

Veterinary Medical Association, American
600 South Michigan Avenue, Chicago, Illinois 60605

Wildlife Society
5921 Anniston Road, Bethesda, Maryland 20034

X-Ray Technicians, American Society of
16 Fourteenth Street, Fond du Lac, Wisconsin

Zoologists, American Society of
Williams College, Williamstown, Massachusetts

COMMERCIAL SOURCES

Many of the sources below provide free literature that can be adapted for classroom use.

Aluminum Company of America
1501 Alcoa Building, Pittsburgh, Pennsylvania

American Iron and Steel Institute
150 E. 42nd Street, New York, New York

Association of American Railroads
Public Relations Department, Transportation Building, Washington, D. C.

B. F. Goodrich Company
Akron, Ohio

Eastman Kodak Company
343 State Street, Rochester, New York

Firestone Tire and Rubber Company
1200 Firestone Parkway, Akron, Ohio

Ford Motor Company, Educational Affairs Department
The American Road, Dearborn, Michigan

General Electric Company, Educational Relations Service
1 River Road, Schenectady, New York

General Corporation, Educational Relations Section
Public Relations Staff, General Motors Building, Detroit, Michigan 48202

Liquified Petroleum Gas Association
11 S. La Salle Street, Chicago, Illinois

Metropolitan Life Insurance Company
1 Madison Avenue, New York, New York

National Cash Register Company
Main and K Streets, Dayton, Ohio

National Coal Association
1130 17th Street, N.W., Washington, D. C.

National Dairy Council
111 North Canal Street, Chicago, Illinois

New York Life Insurance Company, Career Information Service
Box 51, Madison Square Station, New York, New York

Pan American Airways, Educational Director
28-19 Bridge Plaza N., Long Island City, New York

Charles Pfizer and Company
235 E. 42nd Street, New York, New York

Prudential Insurance Company of America
Education Department, Box 36, Prudential Plaza, Newark, New Jersey

Radio Corporation of America
Department of Information, 30 Rockefeller Plaza, New York, New York

Reynolds Metal Company
Richmond, Virginia

Reynolds Tobacco Company
Youth Education Department, 630 Third Avenue, New York, New York

Shell Oil Company
50 West 50th Street, New York, New York

Squibb and Sons Division, Olin Mathieson Chemical Corporation
745 Fifth Avenue, New York, New York

Standard Oil of New Jersey
30 Rockefeller Plaza, New York, New York

United Air Lines, School and College Service
P. O. Box 8800, Chicago, Illinois

United Sugar Beet Association
920 Towers Building, Washington, D. C.

Union Carbide Corporation
30 East 42nd Street, New York, New York

STATE DEPARTMENTS OF GUIDANCE

The states starred (*) below have published recent materials on elementary guidance programs, many of which are available from the office of Mr. G. William Murphy, State Supervisor of Guidance Services. Special note is made of several projects in Ohio in the field of occupational information at the elementary level.

Alabama

Clifton Nash
Consultant, Guidance and Counseling
State Department of Education
Montgomery 36104

Alaska
Wanda Cooksey
Consultant for Guidance, Counseling, and Testing
State Department of Education
Pouch F
Alaska Office Building
Juneau 99801

Arizona*
Muriel Nelson Gurr
Director of Guidance Services
State Department of Public Instruction
1333 W. Camelback Rd., Suite 209
Phoenix 85103

Arkansas*
Leroy Pennington
Director of Guidance Services
State Department of Education
Little Rock 72201

California*
William H. McCreary
Chief, Bureau of Pupil Personnel Services
State Department of Education
Sacramento 95814

Colorado
Gerald F. Ulrich
Director, Division of Guidance Services
State Department of Education
Denver 80203

Connecticut
Robert W. Stoughton
Chief, Bureau of Pupil Personnel
State Department of Education
Hartford 06115

Delaware*
G. William Murphy
Supervisor of Guidance Services
Division of Pupil Personnel Services
State Department of Public Instruction
Box 697
Dover 19901

District of Columbia*
Aileen Davis
Assistant Superintendent in Charge of Pupil Personnel Services
1411 K Street, N. W.
Washington 20005

Florida*
Paul W. Fitzgerald
Director, Pupil Personnel Section
State Department of Education
Tallahassee 32301

Georgia*
Neil C. Gunter
Coordinator, Guidance, Counseling and Testing Services
State Department of Education
115 State Office Building
Atlanta 30334

Hawaii
Hatsuko F. Kauahara
Director of Special Services Branch
State Department of Education
P. O. Box 2360
Honolulu 96804

Idaho
Elwyn Delaurier
Pupil Personnel Services
State Department of Education
State House
Boise 83701

Illinois*
Glenn Waterloo, State Director
Department of Pupil Personnel Services
Office of the Superintendent of Public Instruction
316 South Second Street
Springfield 62701

Indiana
Sparkle G. Crowe
Director, Division of Pupil Personnel Services
State Department of Public Instruction
227 State House
Indianapolis 46206

Iowa
Giles J. Smith
Chief, Guidance Services Section
State Department of Public Instruction
Des Moines 50319

Kansas*
Willard Foster
Director, Guidance and Pupil Personnel Services
State Department of Public Instruction
120 E. 10th Street
Topeka 66612

Kentucky
Kearney Campbell
Director, Division of Guidance Services
State Department of Education
Frankfort 40601

Louisiana*
Carol Eubanks
Assistant Director of Guidance
State Department of Education
Baton Rouge 70804

Maine
Ruth L. Pennell
Supervisor of Guidance
State Department of Guidance
State House
Augusta 04330

Maryland*
Sarah L. Leiter
Coordinator of Pupil Services
State Department of Education
600 Wyndhurst Avenue
Baltimore 21210

Massachusetts
Francis J. Farrenkopf
Senior Supervisor
Guidance, Counseling, and Testing
State Department of Education
200 Newbury Street
Boston 02116

Michigan
Leon Waskin
Coordinator, Titles III and V
Department of Education
123 West Ottawa Street
Lansing 48902

Minnesota
Reynold M. Erickson
State Supervisor of Guidance Services and Pupil Personnel Services
State Department of Education
Centennial Building
658 Cedar Street
St. Paul 55101

Mississippi
Ralph Brewer
Supervisor of Guidance
State Department of Education
Jackson 39205

Missouri
Charles G. Foster
Director, Guidance Services
State Department of Education
Jefferson Building
Jefferson City 65101

Montana
James W. Fitzpatrick
Supervisor, Guidance Services
State Department of Public Instruction
Helena 59601

Nebraska
Donald W. Dean
Director of Guidance Services
State Department of Education
Lincoln 68509

Nevada
Frank R. Brown
State Supervisor, Guidance Services
State Department of Education
Carson City 89701

New Hampshire
James V. Carr
Consultant, Guidance, Counseling, and Testing
State Department of Education
Concord 03301

New Jersey

State Department of Education
225 West State Street
Trenton 08625

Sandra Gildar
Consultant in Guidance and Testing
Office of Secondary Education

Thomas Gambino
Supervisor, Vocational Guidance
Division of Vocational Education

"The World of Work: Increasing the Vocational Awareness of Fifth and Sixth Grade Pupils" (A guidebook for teachers under development.)

New York*

Bruce E. Shear
Director, Division of Pupil Personnel Services
State Education Department
Albany 12224

North Carolina

Carlton Fleetwood
Coordinator, NDEA
State Department of Public Instruction
Raleigh 27602

North Dakota

Glenn R. Dolan
Director of Guidance Services
State Department of Public Instruction
Capitol Building
Bismark 58501

Ohio*

John G. Odgers, Director
Division of Guidance and Testing
State Department of Education
751 Northwest Boulevard
Columbus 43212

Beavercreek Local Schools
2940 Dayton - Xenia Road
Xenia, Ohio

A Three-year study, to be completed in 1968, is being conducted here; the central purpose of which is to assist elementary school pupils with decision making. This project is an outgrowth of a local study of school dropouts. One of the eight objectives is to present an introduction to vocational materials and information to elementary students. They plan to develop local elementary level vocational guidance materials.

Campbell City Schools
2514 Wilson Avenue
Campbell, Ohio 44405

A project underway in these schools during the 1967-68 school year includes provisions for occupational information in the elementary schools through the use of filmstrips, career kits, speakers, and job visitations.

Canton City Schools
618 High Street
Canton, Ohio 44703

One of four objectives in the 1967-68 project in this school system is the provision of occupational information for grades one through six. This will include visits by various workers to the classroom to discuss and demonstrate their jobs.

Dayton City Schools
348 West First Street
Dayton, Ohio 45402

The items of the 1967-68 project in this school system is PACE (Preparing, Aspiring, Career Exploration). This is an outgrowth of their 1966-67 project, which was conducted for the purpose of developing and assembling vocational and occupational materials for use in elementary grades. The aim of the project is an attempt to use a developmental approach to elementary school guidance rather than a problem centered approach.

South-Western City Schools
3708 South Broadway
Grove City, Ohio 43123

A project during the 1966-67 school year in these schools explored and prepared materials about the "World of Work" for use in grades one, two, and three.

Oklahoma
Blan Sandlin
Director of Guidance
State Department of Education
Oklahoma City 73105

Oregon*
Glen L. Weaver
Supervisor of Guidance Services
State Department of Education
313 Public Service Building
Salem 97310

Pennsylvania
Edwin L. Herr
Director, Bureau of Guidance Services
State Department of Public Instruction
Post Office Box 911
Harrisburg 17126

Rhode Island*
Eileen A. Matteo
Consultant, Elementary Guidance
Division of Instructional Services
State Department of Education
Roger Williams Building
Hayes Street
Providence 02908

South Carolina*
Jack A. Duncan
Coordinator, Guidance Services Title X, NDEA
State Department of Education
810 Rutledge Building
Columbia 29202

South Dakota*
Robert L. Huckins, Director
Division of Pupil Personnel Services
State Department of Public Instruction
804 North Euclid
Pierre 57501

Tennessee
Jack Mays
Director, Pupil Guidance and Testing
Division of Instruction
State Department of Education
Cordell Hull Building
Nashville 37219

Texas*
Jack Gilliam
Director, Division of Guidance Services
Texas Education Agency
Capitol Station
Austin 78711

Utah
Avard A. Rigby
Administrator, Division of Special Educational Services
State Department of Public Instruction
1400 University Club Building
Salt Lake City 84111

Vermont

Henry J. O'Donnell, III
Coordinator of Pupil Personnel Services
State Department of Education
State Office Building
Montpelier 05602

Virginia

C. L. Kent
Supervisor of Guidance and Testing
State Board of Education
Richmond 23216

Washington*

Marjorie Mottishaw Anderson
Supervisor of Pupil Personnel Services
Office of State Superintendent of Public Instruction
Olympia 98501

West Virginia*

Paul Brannon
Director, Division of Guidance, Counseling, and Testing, NDEA
State Department of Education
Charleston 25305

Wisconsin*

Richard Roth
State Supervisor
Counseling and Guidance
State Department of Public Instruction
Madison 53703

Wyoming

Thomas S. Morris
Director of Pupil Personnel Services
State Department of Education
Capitol Building
Cheyenne 82001

Educational Resource Information Centers (ERIC)

Two of the 20 ERIC Clearinghouses would be of particular interest to the reader; they are the Clearinghouses for:

Counseling and Personnel Services
611 Church Street
Ann Arbor, Michigan 48114

Vocational-Technical Education
Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

The ERIC Centers are the national depositories for the dissemination of curriculum materials, research findings, bibliographies, etc. in 20 different fields of interest. Copies of these materials are available in either microfiche film card form or printed copy (hard copy). Collections of microfiche documents are readily available in Delaware through the Office of Research and Publications and the Occupational Research Coordinating Unit, both of the Department of Public Instruction. Check these sources, maybe they have just what you have been looking for.

BIBLIOGRAPHY

Baer, Max F. Occupational Information. Chicago: Science Research Associates, Incorporated, 1964.

Educator's Guide to Free Guidance Material. Randolph: Educators' Progress Service, 1962.

Essex, M. W. Ohio Elementary Guidance, Compilation of Project Abstracts, 1966-67 School Year. Chicago: Division of Guidance and Testing, State of Ohio Department of Education, 1967.

Forrester, Gertrude. Occupational Literature. New York: H. W. Wilson Company, 1964.

Guidance for Children in Elementary. Washington: United States Department of Health, Education and Welfare, 1963. (COE-25032 #36).

Hatch, Raymond. Guidance Services in the Elementary School. Dubuque: William C. Brown Company, 1951.

Knapp, Robert H. Guidance in the Elementary School. Boston: Allyn and Bacon, Incorporated, 1959.

Miller, Marion B. Guidance and Elementary School Climate. Dover: State Department of Public Instruction, Division of Child Development and Guidance, 1961.

Norris, Willa. Occupational Information in the Elementary School. Chicago: Science Research Associates, Incorporated, 1963.

Peters, Herman J. and others. Guidance in the Elementary School. Chicago: Rand McNally and Company, 1965.

Peters, Herman J. and others. Guidance in the Elementary School: A Book of Readings. New York: Macmillan Company, 1963.

VT 005 954

Observations on Students and Educational Methodology: Report of the 1966 Regional Workshops of the Council of Member Agencies of the Department of Diploma Programs.

National League for Nursing, New York, N.Y. Dept. of Diploma Programs
MF AVAILABLE IN VT-ERIC SET.
National League for Nursing, 10 Columbus Circle, New York, New York 10019 ($1.50).
Pub Date - 67 51p.

SPEECHES; DECISION MAKING SKILLS; TEACHER WORKSHOPS; *CONFERENCE REPORTS; *EDUCATIONAL QUALITIES; EDUCATIONAL PRACTICE; SECONDARY EDUCATION; *EDUCATIONAL TRENDS; *NURSING; *HEALTH OCCUPATIONS EDUCATION; INSTRUCTIONAL TECHNOLOGY
*NATIONAL LEAGUE FOR NURSING REGIONAL WORKSHOPS, 1966

A total of 958 representatives of 544 member agencies of the Council of Member Agencies of the Department of Diploma Programs attended the six 1966 National League for Nursing regional workshops. There was no central theme and each workshop was tailored to the needs of the instructors who participated. This document which includes the six workshop programs presents four speeches: "Education Today--Awakened Concern for a Critical Matter" by C. Kirk Greer, "Learning, Fact and Fancy" by Frank E. Marsh, Jr., "Preparing Nurses for Competent Decision-Making" by Norman M. Chansky, and "The Impact of Technology on Education" by Stanton W. Saltzman. The abstract of a fifth speech, "Philosophy, Facts, and Trends in Secondary Education" by Roland C. Faunce is also included. (JK)

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OBSERVATIONS ON STUDENTS AND EDUCATIONAL METHODOLOGY

Report of the 1966 Regional Workshops
of the Council of Member Agencies of
the Department of Diploma Programs

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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NATIONAL LEAGUE FOR NURSING
Department of Diploma Programs
10 Columbus Circle, New York, N.Y. 10019

1967

Code Number: 16-1264 Price: $1.50

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PRINTED IN THE UNITED STATES OF AMERICA

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SUMMARY OF THE 1966 REGIONAL WORKSHOPS

The seventh annual series of regional workshops of the Council of Member Agencies of the Department of Diploma Programs differed from the preceding series in that there was no single theme for all six workshops. Instead, a list of topics was developed by the officers of the council, and it was agreed that each workshop would be tailored to the needs of the instructors who would participate in each of the six workshops. Thus, each workshop had a different program (see Appendix), and the series as a whole involved a great many presentations and demonstrations by educators in numerous disciplines. Major responsibility for the planning of the workshops was assumed by the regional vice-chairmen.

In planning this report, it was felt that rather than to summarize the programs here, it would be more useful to the reader to present the six programs as an appendix. It should also be mentioned that it was not possible to include all of the presentations in this report, since only 5 of the 17 persons who bore major responsibility for a presentation submitted papers.

Locations and Dates of Meetings

The dates of the meetings and the cities in which they were held were as follows:

MIDWESTERN REGION
Detroit, Michigan, October 31 and November 1, 1966.
Minneapolis, Minnesota, November 3 and 4, 1966.

SOUTHERN REGION
New Orleans, Louisiana, November 7 and 8, 1966.

WESTERN REGION
Los Angeles, California, November 10 and 11, 1966.

NORTH ATLANTIC REGION
Hartford, Connecticut, November 14 and 15, 1966.
Philadelphia, Pennsylvania, November 17 and 18, 1966.

Attendance

An analysis of the attendance at the workshops is shown in the table on the following page.

Analysis of Attendance

Region	Number of Member Agencies	Agencies Represented at Workshop		Number of Representatives	Number of Guests
		Number	Percent		
Midwest A	108	85	79	144	11
Midwest B	134	93	70	161	4
North Atlantic A	139	111	80	204	4
North Atlantic B	144	127	88	239	-
Southern	130	96	74	158	5
Western	42	32	76	52	-
Total	697	544	78	958	24

EDUCATION TODAY--AWAKENED CONCERN FOR A CRITICAL MATTER

C. Kirk Greer

Today's high school graduate is bombarded with literature telling of the paradise that awaits him in various forms. Industries are clamoring for him; colleges lure him with financial aid; the military views him as officer material. Now, it would be appreciated by some if I devoted my remarks to supporting that view. However, it would be dishonest and destructive of me to do so. I choose, instead, to offer a brief survey of American education--where it is weak, where it is strong, what still needs to be done to achieve excellence.

Discussions in educational circles have always involved buck-passing. Colleges blame high schools for helping to produce students who are grade-conscious, intellectually apathetic, and academically backward. High schools, in turn, criticize grade schools for mass-promoting into their hands students who have never learned to read, write, study, inquire, or think. The grade schools, I suppose, hold the parents responsible for the lazy, immature individuals with whom they are confronted. Much of the criticism is, of course, unjust, ineffective, and self-defeating. Much criticism, though, is warranted. It is the valid criticism that we want to examine. Presumably, we can face realistically the charges hurled at all levels of our educational system. Presumably, we are all dedicated to devoting our best efforts toward improvement of that system. Presumably, we care greatly about its improvement.

On our college campuses, activism, protest, and dissent have reached a new height--and a deceptive volume. One gets the impression that a lack of respect for the law is condoned among college students, if not actually encouraged under the guise of academic freedom. Students picket to protest everything from our involvement in the Vietnam war to laws that ban the sale of marijuana and LSD. The noisy left at Berkeley and other schools rate headlines that smack of frightening rebellion. To evaluate this phenomenon in its proper perspective, let us remember that the number of college students who actually participate in such demonstrations appears to be close to 2 percent--that's all. But remember that 50 years ago, a college education was the privilege of a small elite segment of our population, whereas today it is the birthright of the large middle class. So 2 percent of the 5,500,000 students in our colleges and universities equals more than 100,000--a force quite sufficient to make itself heard.

This present large enrollment on the collegiate level has prompted severe criticism of the cold, impersonal, factory-type atmosphere that bigness alone has created on many campuses. Students register by computer-selected numbers for lecture courses already jammed with hundreds of other equally anonymous scholars. Conceivably--so the argument goes--a student could emerge from four years of collecting credit hours without any faculty member's ever knowing his name, let alone caring about his problems or goals.

Increased student population means increased faculty. But ironically, adding more faculty members to a university's staff often means that the student is getting less atten-

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tion. In many schools, freshmen and sophomores are taught exclusively by graduate assistants, not professors. Today, more and more of a university's money is coming from government-sponsored research grants, funds that support the nonteaching professor and that bring prestige to the university. To too great an extent, the measure of a university's caliber is becoming how much it wins in the grab-a-grant race and the measure of the success of an able and gifted professor is that he does not have to teach.

Problems concerned with the role of the teacher occur on the high school level, too. But here the problem is different. We have a nationwide teacher shortage of approximately 72,500 teachers, and we fail to use to best advantage the teachers we do have. Even though our colleges are annually turning out 200,000 graduates qualified for teaching, we face a shortage that is already alarming and certain to get worse. The school population is growing at a rate of about 1,000,000 students a year 50,000 teachers quit or retire annually, and an estimated 1,000,000 teachers have quit solely because of low salary. The most direct cause of the new shortage is, ironically, the sudden proliferation of federal programs designed to aid education. Federal education and poverty funds have created about 100,000 new positions in the Peace Corps, the Job Corps, and the Head Start programs, which draw off a good many regular teachers; the draft constitutes another drain on the teaching population.

It is one thing to lack qualified teachers and settle for perennial substitutes and mothers who will baby-sit; it is quite another to misuse or ignore the ability and enthusiasm of the certified teachers already in the classroom. Too many high school teachers are asked to tolerate inadequate equipment, outdated textbooks, overcrowded classrooms, voluminous clerical work, and undue pressure from administrators. In addition, they are not expected to desire a voice in planning curriculum, or an income commensurate with their knowledge, experience, and value, or the prestige of their fellowmen. Small wonder that so many teachers have been lured away from the profession for more attractive positions in business and industry.

But a shortage of teachers--and even a shortage of money--cannot be the whole answer to the problems that exist in our high schools. Look at the Catholic schools, for instance. Fourteen percent of all American elementary and secondary school pupils are enrolled in Catholic schools--every seventh student in the nation. The Catholic schools are almost wholly supported by private means; they are scandalously overcrowded; and they are woefully understaffed, having to rely upon underpaid laymen for one-third of their staff. Yet, the Catholic schools are expected by their clients to maintain standards set by publicly supported schools. How well do they succeed? Two comprehensive studies of Catholic schools, both financed by a grant from the Carnegie Corporation, have recently been published. The findings indicate that on the basis of comparative records, the Catholic school students are "superior" both in academic achievement and in learning potential. Eighty-four percent had achievement scores at or above the national norms. The average IQ of elementary pupils is 110, a figure indicative of learning potential that is unquestionably high. Being fair, we must concede that the Catholic school has a tremendous advantage in being able to select its students; the public school has no alternative but to accept everyone within the age limits who comes to its door. My point is simply that to blame the inadequacies of the high school exclusively on a lack of money or on a lack of teachers is to give too pat an explanation, an explanation that the Catholic schools have now disproved.

And something is radically wrong with an educational system that annually produces 300,000 young men who fail the armed forces' simple aptitude tests. Many of these men spent 12 years in what we regard as the finest schools in the world; they will learn to read and write perhaps at Fort Dix. Something is wrong when many thousands of our students drop out of high school each year. My own city of Philadelphia has the questionable distinction of leading the nation with a whopping 46.6 percent dropout rate. Ambitious anti-dropout campaigns are conducted on the premise that getting the victim back to school is most of the battle. The premise is wrong if nothing significant has changed about the school to keep him there. And as a rule, nothing has been changed. It is wrong to concentrate efforts on the dropout himself as though he were at fault. He may, in reality, have made his own shrewd appraisal of what school and the high school diploma are worth in terms of his own future. Students from minority groups discover, for instance, that possessing a high school diploma does not increase their employment opportunities.

High schools are criticized not only for losing large numbers of students annually but for failing to educate those they keep. By spoon-feeding information, teachers help to produce students who cannot reason but who are skillful in passing objective tests. Many students enter college with no concept of independent study and no polished sense of responsibility to further this end. They have discovered little for themselves. They have not lost the joy of learning--they have never experienced it.

What the high schools lack in concern for a youngster's intellectual development is more than offset by their great involvement with his personality development. Who plays a sport? Who doesn't dance at the Friday night dances? Who's going with whom? These are questions discussed seriously by counselors and teachers and perhaps examined at greater length in a personal interview with the student, whether he requests such guidance or not. Routine problems involved in growing up are treated with undue seriousness and unreasonable alarm. Fifteen semester hours in psychology make every teacher an amateur analyst.

Guidance in college admission is often done shabbily, inadequately, and unrealistically. Particularly in suburban schools, teachers reinforce the pressure generated in the home that says that one who is not a college graduate will live a second-class existence. The varied two- and three-year programs offered in the technical and business fields might more fittingly serve the interests of many students. Counselors should become as knowledgeable about these programs as they are about four-year programs. Many students are pressured into going to college despite their having no interest in such training and no talent for it. Most become frustrated and guilt-stricken because failure is inevitable. The few who survive become mediocre accountants when they might have been superior carpenters. Suicidal tendencies on campuses in the United States are greater than anyone imagines--an estimated 1,000 collegians will kill themselves this year; another 9,000 will try and fail; 90,000 will threaten to do so. Who is to blame? More than one-third of the students who begin college will drop out before completion. These figures seem to indicate that many, many unfit students are being cruelly pressured into believing that a college education is essential, a prerequisite for leading the rewarding life. It isn't.

Society in general is responsible for imparting unrealistic expectations of what college is like. Universally, freshmen are disillusioned people. Believing that myriad extracurricular activities will be available, that unlimited freedom and ample opportunity for self-expression will exist, that involvement in contemporary political life and social reform will be encouraged, the freshman expects the school to do as much for his social life as for his intellectual growth. This myth that freshmen think is college may be responsible for much of today's campus unrest.

Society in general and parents in particular can be further criticized for delegating too many extraneous responsibilities to the school and for being involved in the operation of a school to a degree that is detrimental. Throughout the land, our high schools spend portions of the day teaching youngsters to swim, dance, make dresses, bake cakes, and drive cars. These skills can and should be taught by the family; yet, the responsibility has been shirked by the family and is now the province of the school. A healthy interest in education on the part of parents is unquestionably desirable and appreciated, but "healthy interest" has been transcended when a parent demands that his child take trigonometry even after the counselor explains that the child lacks the background and ability for such a course. Insisting that Susie have a part in the play, complaining that homework assignments are too long, undermining the school's attempts at course improvement, in all these ways, the home works against the school--and the child. Teachers, counselors, and principals are generally skilled, trained, dedicated people who should be left free to do their jobs without subtle pressures and unwarranted interference from the home.

Now, certainly the field of education is not stagnant, nor would I want to give the impression that no changes are being made or that no innovations are being attempted. In many respects, education is "where the action is" today. I ask only that you use discernment in distinguishing between the "showy" change and the truly significant one. Not all change is advancement. At all levels of government, enormous amounts of money are now made available for educational experimentation and improvement. Unfortunately, money is more readily available than ideas. Some of the innovations we find on all levels of education are strikingly attractive; some are just well publicized. Budd Schulberg, the famous author, is teaching creative writing to a group of students in Watts. Many students have had the opportunity to study in other countries under the Fulbright Act or other similar programs. Several groups of well-meaning educators devote their time to rewriting classics lest certain words or inferences in the originals offend ethnic groups; incredibly, there are artists hired to reillustrate children's books, depicting one child in every group of ten as a Negro. The Head Start program takes groups of children to the zoo, amusement parks, and concerts and returns the children to their own environment at the end of the day. Too many people evaluate a high school on the basis of its physical plant and the amount it invests in the latest equipment; to such people, a school possessing an Olympic-size pool, ten overhead projectors, tape recorders, and carpeted floors is obviously offering a superior education. Though these are the types of changes that command great attention, I maintain that they leave the vast majority of our students wholly unaffected.

To me, another equally disturbing aspect of the changing scene in education is the overabundance of attention showered upon various minorities of students. In terms of financial involvement in new programs, we tend to ignore the great bulk of our students. Various programs exist that are geared to the 3- or 4-year-old child, to women over 40 who now want to earn a college degree, to retired individuals who want to develop newly acquired interests, and so forth. More than 60 percent of the people in this country between the ages of 5 and 34 are enrolled in school. It seems only fair and sound, then, that our efforts to improve education should focus on this population, not on the fringe groups.

This tendency to look away from the problem is further revealed by attitudes toward curriculum. High school personnel frequently ignore curriculum and focus instead on the social development of students. College professors tend to ignore curriculum and look instead to new horizons in their own particular disciplines. Continuing contact on curriculum must exist among educators if we are to teach students in the best manner possible.

Happily, there have been genuinely good changes in education that are affecting a great majority of our students--whether the changes warrant headlines or not. And the credit for being the most progressive certainly goes to the high schools. Being in close, immediate contact with students, the high schools are the most responsive to the pupils' academic needs and the swiftest in instituting new courses and formulating other curricular changes. High schools are more and more employing tutoring systems to augment classroom instruction. Often, of course, the bright youngster is called upon to serve as a tutor. But, perhaps surprisingly, schools are discovering that when the average student is asked to tutor a slower one, both students learn more at an astonishing rate than would otherwise be possible. Team teaching, a plan whereby the strengths of several different teachers are employed in the teaching of one class, is becoming commonplace in our schools. Some communities are experimenting with year-round schools in which students attend three of four quarters. This system affords greater flexibility of course selection, more opportunity for students to advance at their own speed, and a sounder utilization of the tax dollars spent in school construction. Intelligent, imaginative use of television and films in the classroom can enormously enrich a traditional course and significantly broaden a youngster's outlook. A justifiable desire on the part of teachers for higher pay, greater prestige, and a stronger voice in their own profession is leading to a new militancy among teachers. Because today's teacher is no longer a subservient martyr, we can expect worthwhile changes to continue coming from our high schools.

The colleges, however, have not been idle in making significant changes in programs and practices. The use of films, television, team teaching, and the latest laboratory equipment is just as frequent in the college classroom. The shortage of fully qualified professors has made it essential that institutions of higher learning give thought to the possibility of using new instructional patterns such as independent study. Under this plan, the traditional pattern of required classroom attendance would vanish, to be replaced by a student's seeking such faculty guidance as he feels he needs in individual or group meetings. Reading lists could be distributed, assignments made, and tests given to measure progress. In addition to solving the problem of teacher shortage, a strong emphasis on independent study makes learning the responsibility of the learner. I submit that this goal is one of the major objectives of all education.

A new solution to an old problem is the emergence of consortiums, arrangements whereby a group of colleges pool their resources by coordinating classes, programs, and faculty appointments. Colleges and universities are deciding that they can gain more by cooperation than by competition; the pressure for excellence is forcing them to look beyond their own campuses for help. Particularly in the field of scientific research, universities have been able to undertake expensive projects that none of them could have financed alone. Consortiums are becoming the most popular way for schools to make the most of their educational facilities.

You have heard, perhaps, of the multiversity--a vast, rambling institution like the University of Illinois. Such huge universities offer great libraries, star teachers, top-notch research facilities--but often at a high cost in impersonality and student loneliness. Tiny colleges offer the warmth and human values of close relationships--but often at a high cost in academic shortcomings. To get the best of both of these worlds, several big schools such as Florida State University, Michigan State University, and the University of Kansas are experimenting with what are termed living-learning clusters. The plan involves having small groups of freshmen take basic courses together, sharing the same assignments and teachers--and, in some cases, dormitory and dining facilities. This subdividing of the student body, hopefully, will promote closer, more meaningful relationships, and therefore, a more productive college experience.

There are those who argue, though, that the diversity of relationships at a big university is one of its glories, not one of its handicaps. The impersonality that is thought of as standard in a large school can be an asset. If one objective of university education is to mold independent-thinking, self-reliant individuals, then a university must be free to encourage responsibility on the part of students; a university must not be a substitute parent that fosters perpetual adolescent dependence. Small classes are effective for certain subjects at certain times, but once let a class enrollment exceed seminar size--perhaps fifteen--in many instances, it may as well be 1,500. I for one would much prefer to hear a brilliant lecture in an auditorium than to participate in a windy discussion around a table. Students who are encouraged to be independent, mature adults are too busy to waste time on pseudo dialogue or to parade their personal problems. Perhaps, with scholarly pursuit on the university level, anonymity has certain advantages after all.

In keeping with what should be the function of a university, let me comment on the activism currently found on our campuses and the unwarranted criticism that has been leveled against it. As I have mentioned, perhaps it is yet another change in the current educational scene that demonstrations, protest marches, sit-ins, and the like are more frequent occurrences on college campuses and are condoned by administration officials. Bear in mind the three main functions of a university: to transmit knowledge imaginatively from one generation to the next, to provide society with a body of trained professionals, and to expand the boundaries of knowledge through research and discover new truths. Now, no one will deny that manifestations of student independence and social consciousness are occasionally excessive, bad-mannered, or unpatriotic. If there is to be an excess, however, it is far better that it be an excess of interest and activity than an excess of apathy. But student intemperance should not prompt university authorities to act in the place of parents. If students go to extremes and violate the law, let them be subjected to the penalties of the law. The university should not be expected to turn aside from its proper job, which is education and research, to the petty pursuit of discipline.

It is heartening that colleges have reflected the spirit of change to the degree that they have. Of every 100 people in this country between the ages of 18 and 21, 48 are now college students, a sizable population to benefit from these innovations. The advent of so many state universities constitutes another revolution in education. Because state universities have an emphasis on teaching rather than research and thus can eliminate costly research libraries and facilities, the per-student costs are often less than half of what they would be in a land-grant university. State universities make higher education available at a modest cost, and such universities will soon be educating the majority of our students.

A four-year college program, though, is not meant for everyone. Fortunately, with the emergence of more junior colleges and technical schools and the virtual explosion of community colleges, we are coming nearer to meeting the needs of all students and of society. It is no longer a question of a four-year college or nothing. New curricula are instituted in these schools and in the colleges to reflect the changing needs of business and industry. Wider variety exists today in the possible forms higher education may take. There is much more likelihood that a student will find his niche, discover his talents and strengths, and thus contribute significantly to society.

But of course, still more has to be done if we are to succeed in developing fully the potential of our young people. More dialogue should exist between high schools and colleges and other institutions of higher learning. At all levels, there should be more concern with where a student has been and where he is going. The college professor cannot do an effective job if his interest in the student begins the day this 18-year-old boy appears in freshmen English. How have the last 18 years shaped this boy? What should happen to him in the next 4? Universities, for example, have fostered and practically insisted upon changes in the secondary school curriculum, but only a few universities have been as conscientious in speedily changing their own programs. Colleges must become more cognizant of what is actually taught in high schools; at present, too many colleges pay only lip service to such an interest. With some understanding of a student's previous experiences, teachers at all levels must educate the student they see before them, not the student they wish he were.

In addition to offering more varied and flexible programs, all schools must vary their approach to old programs. Let's examine the current plight of the nursing school, for example. We face an acute shortage of nurses in this country, and the problem is not explained solely in terms of the low salaries paid nurses. At the same time, nursing schools are rejecting thousands of applications submitted to them each year, one out of three, in fact. Obviously, changes in approach are in order.

In making decisions concerned with improving education, I plead for a more realistic approach and less mouthing of myths. It is a myth, for instance, that colleges are overcrowded. This past September there were at least 125,000 vacancies in colleges throughout the land. We get the impression that colleges are overcrowded because more than 50 percent of the applications go to fewer than 10 percent of the schools. It is a myth that a college with stringent entrance requirements necessarily offers a superior education. It is a myth that excellent students are available in great numbers. All schools should face this fact in setting admissions standards and in planning special programs. The necessity of admitting more and more students from low-income groups changes admissions standards, and we must face this fact. The abundance of financial aid often attracts an abundance of unqualified candidates. It is naive to assume that lowered tuition, ample scholarships, et cetera will lure thousands of poor but brilliant students to our campuses. Such students just don't exist in that quantity.

Initially, I said that I wished to express concern over many facets of our educational system. Rest assured that I want to express optimism, too. Because education is enjoying a new and unaccustomed affluence, it is being widely hailed as the nation's "major growth industry" of the decade ahead, replacing national defense, which enjoyed that position during the 1950's and early 1960's. Annual expenditures for schools and colleges now top the $40,000,000,000 mark--up from $26,000,000,000 in 1960--and there is every indication that they will continue to rise. This expenditure of money has resulted in an awakened interest, an enlightened leadership, and--most hopeful of all--a concerned public. All of our citizens realize--to some extent at least--that our survival as a civilized people with the responsibility of world leadership depends directly on the quality of our educational system. We cannot afford to let the talents of any of our young people go untapped. In our highly technological society, we simply do not have skill to waste.

Now, young people are noted for their resilience, their idealism, and their desire to learn great truths for themselves. I have great faith in the ability of students to put into perspective the views of their elders; no doubt, the students will survive admirably despite our best advice. I question whether we can survive without them. With our heightened interest in and concern for our educational system, I am daily becoming more convinced that I would not be proven wrong if I placed an equal amount of faith in educators as well.

LEARNING, FACT AND FANCY

Frank E. Marsh, Jr.

The motivation for these remarks grows from my concern about the quality of teaching. I believe that teaching and learning can be substantially improved and that as one ascends the educational ladder from elementary school to the university, the quality of instruction tends to become less creative and less effective. Several general comments are in order before we attempt to look at certain fancies, or fallacies, that interfere with the quality of instruction.

It is fruitless to argue about whether teaching is an art or a science. We have wasted far too much energy and time over this issue. The fact of the matter seems to be that certain people have traits and talents that are assets in teaching. Others, because of certain personality traits, will probably never be effective teachers. It is safe to conclude that most teachers can be helped to become more effective in their teaching role. Science has helped us in many ways to better understand how learning takes place, and we must learn to use this added knowledge creatively.

Today, there is a tendency to play down the role of the teacher. With the advent of many technological aids to learning, we are sometimes led to believe that the teacher is no longer very important. Nothing could be more ridiculous. It is clear that even more creative teachers are required to make the new media of instruction effective and meaningful to learners.

We find in some quarters today a sorry dichotomy existing between the so-called subject matter specialists and the methodologists. This is a senseless schism. Some subject matter specialists maintain that work in teaching methods is a waste of time. A professor at Smith College was reported to have said that all study of so-called methods courses should be abolished. This schism is unwholesome. We should all join hands to improve teaching and learning. Methodologists must strive to improve their offerings and to eliminate redundancy. If they are to be taken seriously, they must practice what they preach about creative teaching. They must realize that teaching and learning cannot take place in a vacuum. Mastery of subject matter is a prerequisite to effective teaching.

Let us examine a number of fancies, or fallacies, that impede learning and teaching.

Some teachers fancy subject matter as an end rather than a means. I once heard a teacher remark, "We covered ten pages today." I could hardly refrain from saying, "*You* may have covered ten pages, but what about your students?" Creative teachers realize that subject matter, important as it may be, is as much a means as it is an end in itself. The logical question that follows is, If subject matter is a means, it is a means to what? The answer is that subject matter can be a means to several things, depending upon the circumstances surrounding the learning. It might be a means to the solving of a problem or problems. It might be a means to performance of a task or the development of a skill. It might be a means toward the altering of one's behavior, or

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it might be a means to personal enrichment or growth. One definition of learning states that learning results in changed behavior. We must not separate subject matter from the use that will be made of it. Those who consider subject matter merely as an end are guilty of a fallacy. Some teachers fancy that with subject matter competence comes a sort of built-in ability or capacity to transmit it to learners. Depth and breadth of competence in subject matter make possible a perspective, which is an important necessity for good teaching, but they do not insure that a person, once having acquired this competence, can organize it or present it in such a way that learning will take place automatically. This lesson came home to me when I served as an athletic coach. Having developed a certain skill in baseball, I had to carefully analyze the basic aspects of the game before becoming a competent coach capable of transmitting my knowledge to others.

Some teachers who work at the upper levels of education seem to believe that they bear no responsibility to work at the process of communication. They fancy that there is a sort of built-in motivation in mature learners. This sort of teacher will worship objectivity and accuracy and neglect the problems of motivation. The simple fact is that all learners, regardless of age or level of sophistication, deserve effective and creative teaching. The instructor in a school of nursing and the instructor in the university have a common responsibility to communicate ideas, values, facts, understandings, and appreciations. Motivation is a problem at any level of learning. This fancy, if true at all, is greatly exaggerated by many teachers.

Some teachers fancy that they are maintaining high academic standards when a certain percentage of the students are failing. They feel that if all or most of the students succeed, the course must be lacking in quality or the standards must be too low. I believe that this position is false. A teacher should be pleased, not frightened, when students are able to perform well. Some institutions request that instructors report the percentages of students achieving each grade designation. In this way, the institution is subtly propounding a fallacy about learning.

Some teachers mistake complexity and confusion for quality. It is true that some ideas and concepts are extremely complex, but most of the great ideas can be expressed in relatively simple terms. A good teacher can express ideas with clarity and accuracy. When large numbers of students are confused, the fault must be with the organization or presentation of the subject matter.

Some teachers utilize fear as a major source of motivation for learning. Any teacher will realize that fear can motivate, but good teachers are quick to recognize the limitations of fear. Fear is an extrinsic form of motivation and is negative. Intrinsic motivations that grow out of the subject matter itself are positive and provide a far better form of motivation for learning. The joy and satisfaction that arise from success and accomplishment produce better and longer-lasting results than fear can ever produce. When it is necessary to utilize extrinsic forms of motivation, be they positive or negative, the good teacher realizes the limitations involved and attempts to use them to create intrinsic forms of motivation that are positive and more effective in the long run.

Some teachers fancy that methods of instruction are neither important nor significant in improving learning. This is a fallacy and tends to make teaching less effective. Any teacher who has approached this problem with an open or creative mind has had dramatic proof that methodology can make a difference in learning. Some classrooms remind one of a soap opera; they are dull and uninspiring in their monotony and they actually impede learning. I once knew a teacher who conducted French classes in this routine way. First, the students put their homework on the blackboard; then the teacher corrected it;

next, she gave a brief explanation of the lesson for the following day; then came a study period in which that lesson would be started. What a dull routine and what a waste of wonderful possibilities for creative teaching. Variation in method and approach can be an effective motivater and can improve the quality of learning and teaching. Some teachers feel that the more they evaluate, the more accurate the grade of students will be. This is a sad fallacy. Most teachers evaluate too much and too poorly. They fail to realize that evaluation is an integral part of the teaching-learning process. Teachers reveal a great deal about themselves through their evaluations. Realizing that all teaching represents selectivity on the part of the instructor, the teacher reveals where his values reside when he tests. Some teachers fail to grasp the close relationship between objectives and evaluation. Most teachers can develop a fine set of objectives, but many fail to ask questions that relate to their objectives.

Student evaluations of teaching represent a most controversial subject among educators. Many teachers discount them and maintain that they represent only immature, biased viewpoints and have little, if any, credibility. I believe that position is fallacious. Most informed people admit that we seldom make a serious effort to evaluate teaching, particularly teaching at the adult level. Student evaluations are often the best single index of teacher effectiveness. Most students are fair and recognize and appreciate the genuine effort that goes into creative teaching. I do not believe that student evaluations should be used to decide promotions or salary increments, but I do strongly believe that the evaluations can be used effectively to improve the quality of teaching and to increase the quality of communication between students and teachers. Rather than fear this form of evaluation, teachers should welcome the opportunity to learn how their students react toward their teaching.

Having looked at a number of fancies that affect teaching and learning, let us now turn to a more positive consideration of certain facts or understandings that contribute to learning. Education can rightfully be considered a social science. Several disciplines contribute to the body of subject matter comprising education. Sociology helps us to better understand the role of education in a society. Anthropology sheds light upon man's developmental growth from barbarism to culture. History, political theory, and philosophy contribute to our understanding of man's past, present, and future and help to provide the substance and the purposes of teaching and learning. Psychology was first related to education by the German scholar Herbart. Since then, all teachers have studied psychology in one form or another. Perhaps John Dewey was the first to provide an articulated philosophy, a method, and a psychology for teaching and learning. Exciting study, research, and experimentation that have major implications for teaching and learning are taking place today. Many of the ideas stem from the writings and the teachings of John Dewey. Let us examine a few psychological principles that have significance for teaching and learning.

Psychologists have long discussed the nature of learning. This matter might, on the surface, seem strictly academic, but what one thinks about the nature of learning makes a great deal of difference. Through the years, our understanding of the nature of learning has gone through several stages. Utilizing the reductionist approach, early educationists tried to reduce learning to its prime elements--a stimulus and a response. Learning came to be thought of as a neurological process. This interpretation of learning leads to a rather mechanistic kind of teaching.

Dissatisfied with this interpretation, psychologists, taking a lead from Pavlov, discovered the process of conditioning. Learning could be described as a sequenced series of conditionings, deconditionings, and reinforcements. Man could be described as a bundle of conditioned responses. Most of us realize that this insight provides valuable implications for teaching and learning.

Following Dewey, psychologists took a deeper look at learning and began to realize how complex and individualized the learning process really is. We now tend to think of learning in terms of modified behavior and reorganization of experience. No learning takes place in a vacuum. Whenever we encounter a new experience, we must deal with it in relationship to our past experiences. Dewey described learning as a reconstruction of experience. Many teachers accept verbalisms in place of learning. A colleague once recounted to me an incident involving a fourth-grade class in his school that was seemingly doing well in arithmetic but could not make change correctly when purchasing their lunches in the school cafeteria. Yes, it makes a great deal of difference how one interprets the nature of learning. The good teacher recognizes the complexity and the individualized nature of learning and refrains from making hasty, oversimplified conclusions.

We used to think of the teaching-learning process as a matter of training minds. We have come to learn that this interpretation is grossly inadequate. Students come to a learning experience not only as minds but as total persons. It is true they have widely varying mental capacities, but they are bodies, emotions, and personalities as well. Differences among people are greatest in these latter areas. An individual functions as a totality, a whole with the various parts interacting and interrelating. During the period of learning, the teacher has some measure of control over the atmosphere that prevails in the classroom or laboratory. The effective teacher, realizing that more than the student's mind is involved, attempts to create an atmosphere that is warm and positive and productive of confidence of success and accomplishment. The good teacher recognizes the implications of the total-person concept of learning.

The greatest single problem for teachers is motivation. Actually, a teacher must come to the point where he realizes that he actually cannot teach anyone anything. He can only create an atmosphere or a situation in which learning is possible. Learning, however, is an active process that a person must perform for himself. The old adage "You can lead a horse to water, but you cannot make him drink" is relevant here. The teacher must be a motivater, an inspirer, and a guide to learning. The earnest enthusiasm of a creative teacher tends to be contagious, and let us not think of this concept as being old-fashioned. It is at this juncture of the teaching-learning process that the teacher has the greatest opportunity to be creative. He must exploit the natural interests that he finds. Once having discovered an interest, the creative teacher helps the student to enlarge it and direct it to worthy goals. Many successful men recall that it was an inspiring teacher who first awakened them to their potentialities.

Today's teacher can draw upon a wide range of stimulating devices and aids to learning. He can vary his method and approach, but still there will remain the indefinable quality of the teacher as the central factor in learning.

For many years, educators have spoken about individual differences among students. It is one thing to recognize that people differ in a wide range of characteristics and qualities and in a multitude of ways, but it is quite another matter to know what to do about it. Despite what certain authors have said, educators do not relish the idea of a society made up of people who are all alike. One must admit, however, that there are a number of powerful forces in modern-day America that tend to bring about conformity. It is futile to dream of the good old days when individualism had some meaning. It is fruitless to think that we can ever return to those days of yore. We must discover ways to allow for the expression of individualism in a complex society. Some helpful ideas are coming from the exciting area of group dynamics. We have come to realize that a group is a dynamic concept. Sometimes our teaching fails to take these possibilities into account. I am not speaking of the horrendous process of turning all learning over to the learners. That represents an abdication of the responsibilities of the teacher. In place of the dull, rigid, one-way view of learning and teaching, let us realize that some learning can be more effective when group procedures are involved, for we know that learning is an active process. Discussion, debate, role-playing, and team-learning have interesting possibilities. The time is past when the teacher can close the classroom door and act like a dictator in his little kingdom. It is conceivable that a student can better help one of his peers to grasp a concept or understand an idea than the teacher can. Certainly, teaching machines can systematize learning and present it more accurately and with less effort than can a teacher, but I am not ready to believe that a machine can deal with individual differences better than can a sensitive, alert, and creative teacher.

Older systems of psychological thought utilizing the reductionist concept of learning seemed to encourage teachers to begin learning with the simplest unit and to proceed through the various segments or parts to the whole of whatever was being taught. You all can recall your music lessons that began with the lines and the spaces and were to culminate in a knowledge and appreciation of music. Perhaps you began your study of a foreign language by learning single,unrelated words. This concept of learning might be described by noting that the whole becomes significant in terms of its parts. Modern educators have reversed the concept; they now believe that the parts become meaningful in relation to the whole. In place of the uninspiring lines and spaces, we see elementary children playing weird instruments that help them to discover music as a meaningful human experience. Once having had this experience, the child is motivated to go back and discover the parts that will give understanding to his playing. I know a French teacher who allows no English to be spoken in his classroom for the first semester. Students must communicate in French either in words or by actions. After the students have grasped something of the language in action, they go back and pick up the grammar and sentence structure that will make their expression orderly. During World War II, we were shown by the military establishment how effective the oral method of language instruction could be. You see, we assume that all learners need to master the language in the same way and for the same purpose. This just is not true. Good teachers learn from this concept of the whole and the parts. They come to realize that it is important to have the learner grasp the whole before, or at least while, he is dealing with the parts. There is an important motivational factor involved in this concept.

We used to think of the human mind as a muscle to be exercised, trained, and brought into proper condition. We thought that the more difficult and distasteful the material being learned, the more effectively the muscle would be trained. Today, educators reject this idea, at least in theory if not in practice. We refer to this concept as transfer of training. The rejection of this concept was not an easy or a total one. Rather, we went through an intermediate stage in which we tried to prove that there are identical elements in learning that can be transferred from one learning situation to another. For example, in mastering arithmetic, the mind can master a skill in logical thought that will be useful in philosophy. Today, we prefer to discuss this concept in terms of the enlargement of experience. In his great work "Ulysses," Tennyson remarks, "I am a part of all that I have met." As teachers we must try to help our students to bridge the gap between their experience, which may be limited and less extensive than ours, and whatever we are trying to impart. This calls for the utmost in skill, imagination, patience, and empathy. In conclusion, let us remember that we who teach have the precious responsibility of communicating with learners. A school is more than buildings, libraries, books, research, pencils and papers. A school is a place where those of us who have had the benefits of teaching and learning and experiences have the honor and the joy of communicating something of what we have learned to others. The theme of this meeting reflects the concern of your profession for quality in teaching. I hope that these remarks have provided some stimulation and some clues as to how we may become more effective teachers.

PHILOSOPHY, FACTS, AND TRENDS IN SECONDARY EDUCATION

(Abstract of Speech)

Roland C. Faunce

Since the 1930's, significant progress has been made in secondary education with regard to better instructional materials, better technology, better qualified teachers, better school plants, and better salaries and status for teachers. During the 1930's, however, certain emphases and goals were sought that do not appear to be emphasized in the 1960's.

1930's	1960's
Emphasis on small classes.	Emphasis on large groups.
Involvement of learner in planning and doing.	Emphasis on presentation.
Provision for individual differences within regular classes.	Ability grouping and tracking.
Development of core programs.	Emphasis on specialized courses.
Guidance movement directed at classroom teachers.	Training and appointment of specialized counselors.
Golden period of the community school.	Schools regarded as instruments of national survival.
Questing, experimental spirit.	Commitment to technology and acceleration.

In the 1930's some great programs were based on certain assumptions that collectively defined the core curriculum, which assumptions are held by many people today, also. The heart of the core curriculum is method.

1. We are seeking meanings and relationships between the various things we study, and this search leads us to attempt to integrate or relate the subject fields.
2. We are trying to use subject matter from any source as a means, not as our basic goal in education.
3. We are defining learning as problem-solving.
4. We are seeking resources beyond the printed word in our attempts to help our students solve problems.
5. We believe we must know and accept the learner if we are to help him to learn.

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How are we doing today in respect to each of these five basic assumptions?

1. Relationship of subject fields: The combination-of-subjects approach is very popular in the junior high schools but may not move much beyond the grouping of two or more subjects in a block of time. The senior high schools have largely abandoned such efforts, but recently the growth of the humanities movement seems to herald a return to the search for relatedness. Also, certain programs for the potential dropout have assumed at least the appearance of core programs. On the other hand, national curriculum studies are, almost without exception, geared to separate subjects and increased specialization.

2. Using subject matter as a means rather than as a goal: Who is looking at goals today? There is a sharp pressure for covering content. We are talking of the structure of the subjects. We are devoting efforts at the national level to the study of how to arrange subject matter. We are expanding our already staggering testing programs and moving toward national assessment, based, we assume, on control of subject matter. We continue to reveal to our students our real goals, as we give them tests based on control of subject matter and homework assignments that reinforce the centrality of subject matter in our own thinking. We are looking at subject matter instead of at students for our clues in planning the curriculum.

3. Defining learning as problem-solving: This is another way of defining motivation. In this view, the teacher's role is that of architect of a learning situation; each new class becomes immersed in the task of creating its own learning. Unless this is achieved, the learner generally spends his time and effort in avoiding the teacher's purposes. Answers should not precede questions. Problem-solving calls for action on some level--it is essentially a present-tense business; it demands reflective or critical thinking. Many of the new subject studies reflect this problem-solving emphasis in a major way (modern math, science). Student involvement in evaluation is increasing; there is more emphasis on individualizing instruction; but systematic teacher efforts in these directions are not common in senior high schools.

4. The quest for resources beyond the printed word: We are doing better here. We have better school plants and better materials for instruction. Libraries are becoming resource centers. Educational technology, including ETV, could be a rich resource if we can develop it in such a way as to make choices possible. Classroom libraries have increased, especially since the advent of paperbacks. Improved communication makes the use of persons as resources feasible. Programed instruction could help to solve individualization of learning.

5. Knowing and accepting the learner: This is the guidance motif of instruction (guidance defined as effective teaching). It demands assignment of fewer students to each teacher and for longer time blocks--hence, the popularity of double periods in the junior high school.

Hopeful signs: (1) Concern about youth attitudes and relationships, number of self-concept studies, concern for increasing holding power of schools; (2) Head Start program; (3) impact of perception psychology; (4) interest in creativity.

Problems remaining: The concept of preparation for a later level is always with us, but it is sharply accented in schools today. High school is only a preparation for college for many, perhaps most; junior high is a prep school for a prep school; elementary school is preparation for junior high--each grade for the next. You can't win this way. The spectacle of each teacher preparing for the next teacher is as familiar as it is fruitless. Creeping specialization is extending downward into elementary grades.

IN MY DREAM

I heard some high school teachers cry, "What did they learn in junior high?"
But those who teach the seventh grade a different explanation made:
"The grade schools simply don't succeed: they never teach 'em how to read."
Each grade school teacher says, "Oh dear! What did she teach them all
last year?"
In first grade, with contempt sublime, we say, "Kindergarten's a waste of
time."
And kindergarten is a mess because parents have failed with readiness.
Ah me! The day is almost here, with needles and new pills each year,
We'll brave the pregnant mother's wrath, and inject prenatal science and
math.

If we think of ourselves as basic guidance workers, we become concerned with the students' orientation; we use guidance techniques for the study of the individual and for helping him to make wise choices; we seek continuity in our relationships with students. We aim to improve the individual's self-concept: We are interested in "canness," in growth in all aspects of learning, including reading, writing, and speaking.

All this changes our roles as teachers: It means we must know our students, care about what happens to them, help them do something about their problems, and help them become responsible for their own learning.

The chief avenue to curriculum improvement is the teacher's approach to students. If we can develop teachers who are thinking and enthusiastically working on individual needs of learners, we shall have a fine curriculum.

In summary of our goals as teachers, we should remind ourselves of "The Ten Commandments for the Core Teacher."

TEN COMMANDMENTS FOR THE CORE TEACHER

Thou shalt not diminish any of these, my creatures;
Thou shalt build the spirit taller, the courage stronger;
Thou shalt not be puffed up with self-importance nor seek thine own security
by acting superior to thy benighted brethren;
Thou shalt not build status with they colleagues by flunking thy students;
Thou shalt not squelch the human soul, nor seek to abolish human difference,

nor answer questions thy students have not yet asked, nor deprive
them of their zest for knowledge;
Thou shalt hold the lamp of experience high and light the way to constant
questing;
Thou shalt open the door to new adventure;
Thou shalt know and love they fellow learners and ask not in scorn the
number of their birthdays;
Thou shalt learn them and care for them and help them pursue their
purposes; AND SEEK NOT TO KNOW HOW ALL THESE THINGS
CAN COME TO PASS, FOR
THOU ART A CORE TEACHER.
AND THE SPIRIT OF CORE IS THIS!

PREPARING NURSES FOR COMPETENT DECISION-MAKING

Norman M. Chansky

We strive to know the world as it is. Imagine a patient blinking his eyes or gargling; imagine a nurse recording a temperature on a patient's chart--even though you are not actually witnessing these actions, the images you conjure up are standard; they do not differ from those unfolded in your neighbor's imagination. Talk about them to your neighbor. He will get the picture that is in your mind's eye. Now, imagine you are learning how to analyze the oxygen concentration in an oxygen tent. Several images come to you. You might remember reading books on the therapeutic uses of oxygen. You might recall that the normal supply of oxygen is due in part to lack of obstruction of passageways to the lungs. You might remember having used a nasal catheter technique one time and having been uncomfortable because not only did the patient gag when the catheter tip was introduced but there was no way of measuring the exact amount of oxygen intake. Perhaps you see yourself outside an oxygen tent manipulating dials and then reading a scale that designates the percentage of oxygen in an air sample. No single image comes to you. The exchange of your perceptions with your neighbor's might sound like a verbal double exposure. People differ with respect to their interpretation of the word "learning," too. Unlike "eye blinking" and "recording temperature," which are descriptions of behavior, the word "learning" is an inference and as such, has no standard images attached to it.

Even psychologists do not operate with identical definitions of the word "learning". Nor do they refer to the same behavior each time they use the word. Sometimes they mean acquiring an action, sometimes recalling an action, sometimes applying an action already acquired to a new situation, and sometimes reshaping an action so that it is more suitable to the demands of a situation. Some educators, moreover, connote achievement when they use the word "learning." Even when psychologists state which phase of learning they are referring to, they never measure that phase directly. Rather, they measure what an individual demonstrates he has acquired, retained, or applied. The implication here is that someone may know something and yet not demonstrate it. Certain testing methods are more conducive than others to demonstrating what one remembers. Give someone a list of technical terms to memorize, and then take the list away. If you were to instruct him to write down everything he remembers on a blank sheet of paper, he would receive a much lower score for remembering than if you were to give him a sheet of paper with the terms on it with instructions to write explanations of these terms. Learning, then, may be defined as involving a variety of mental operations. The way one measures learning influences the amount of correct behavior an individual student will demonstrate.

Many people allege that they want to know more about learning when what they really mean is that they want to know more about motivation. What can the teacher do to get the nurses to learn more? In marking, should she use A, B, C, D, and so on, or pass

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or fail marks? Is it better to cater to a nurse's interests or is it better to make her learn something she does not want to? Although learning is suggested in each of these questions, the intention of each question focuses on motivation.

Ability has also been suggested as an explanation of why people learn fast or slowly, much or little. Behavioral scientists, moreover, do not agree on definitions of ability, either. What is not disputable, though, is that people demonstrate that they perform acts at different rates of speed and with different degrees of precision. We aspire to perform skillfully what is expected of us in the educational enterprise. We are trying to get students to take on certain attitudes, to acquire certain knowledges, and to adopt certain action patterns that would result in their carrying on a service with speed and precision. We ask, "Do these results grow from learning? Ability? Motivation?" When we ask these questions, we do so without standard definitions of the terms. A semantic scuffle ensues. No one is any closer to the goal of teaching the attitudes, knowledges, or action patterns stated so nobly in the curriculum guides. At program planning meetings, more often than not, the goals are lost in a maze of verbiage and in one individual's struggle for the power to impose his own terminology on another.

A SYSTEMS POINT OF VIEW

The task before us is to examine what is known about the educational process to see what can be applied to the education of nurses. Rather than look at the education of nurses through the myopic terminology of learning and motivation, let us drain the uncertainty out of our own vocabulary. Let us look at nursing education from a different point of view. Instead of beginning our search with the question, What should nurses learn? or How should we be teaching them? let us ask this question, What actions do competent nurses perform that are not demonstrated by the less competent nurses or by aspirants to other careers? One way that nurses differ from non-nurses is in the making of judicious decisions concerning patient care. Not only are their decisions precise but they are made with utmost speed. Making correct decisions quickly, you will agree, is one general outcome of a nursing program. The starting point of building any educational program is to state what results you expect to find. Therefore, we ask next, What must go into a program to bring about this outcome? What goes in is referred to as the input. By combining the insights of nurse educators, psychologists, sociologists, and economists, an efficient and effective system for the education of nurses can be built. For the education of nurses to be effective, it must be systematic. There is a logic to the several phases of educational programs; not only that, there is a sequence of activities that joins one phase of a program to another.

OUTCOME

Nursing education, like any other educational system, may be viewed as containing inputs that optimize the outputs. Let us limit this discussion to one output--namely, the making of competent decisions. We ask, What specific competent decisions must a nurse be prepared to make? A sample of such decisions will now be given to illustrate the wide range of outcomes a nursing program may be expected to produce. A nurse must know how much of a patient's stay is to be planned in order to maximize adjustment to hospital routine without jeopardizing the patient's need for autonomy. A nurse must know how to identify those symptoms of the patient that require contacting the attending physician for change or renewal of orders. A nurse must know the kinds and the timing of exercises that will maintain or restore a patient's health. A nurse must know how to choose, in communicating with patients, terminology that mitigates anxiety about their illness. A nurse must be prepared to identify the signs of a respiratory disease that requires special posturing to promote drainage; to decide how often a patient is to be changed to a dorsal recumbent position; to decide when to encourage a patient to take fluids or solids; to identify signs on the skin that indicate irritation from adhesive; to distinguish microorganisms that live in the absence of oxygen from those that require it for life; to decide which microorganisms require concurrent disinfection and which require terminal disinfection; to know when an object is properly sterile; to distinguish a blood pressure reading that is high because a patient is suddenly excited or frightened by having a nurse touch him from one that remains elevated after a period of adaptation; to distinguish between the reaction grade 0 and grade 1 when using Benedict's qualitative test for sugar in the urine; to distinguish between like-appearing abbreviations--for example, min, mil, tsp., tbsp., o.m., o.n.; to recognize the agglutinins (alpha, beta) and agglutinogens (A, B) found in blood to effect a transfusion that will not produce shock. A nurse must be prepared to make these and innumerable other decisions.

INPUT

Personnel

The role that an educational psychologist plays in working toward the development of an effective system of nursing education is to relate to program planners those observations, facts, and assumptions gleaned from research. Since psychologists themselves have only scratched the surface of systems of education, the suggestions they bring to you are in the form of hypotheses for you to consider rather than practices, facts, or beliefs for you to adopt without reservation. With this in mind, let us look at the input side. What must we put into a program to produce more competent decision-making in nurses? What we see first is manpower. An applicant is accepted in the nursing school. We imagine that person to be a girl about 18 years old, a high school graduate with an IQ of 115. Without proof, we have assumed that each of these considerations is important. I would like to question these assumptions because at least 25,000 nurses will need to be graduated annually in order to fill the placement demands of the field. Many more will need to be prepared to fill the new positions being created. Some of these positions are as clinical specialists, teachers, and industrial nurses. The demand for nurses is far greater than the supply. Perhaps we ought to reexamine our assumptions and find out if more males could be trained; perhaps nurses with higher IQs could be attracted to the nursing school. Too little is known at this time about the age, sex, and intelligence characteristics of those nurses who make competent decisions. Let's not close our minds to all of these possibilities. In the absence of proof that any of these characteristics produce competent decision-making in nurses, let us examine some assumptions for which there is both clinical and research evidence. From such sources of information, I would like to suggest four factors that contribute to successful adaptation to a career--commitment, vocabulary, flexibility, and a thirst for knowledge.

Some girls I have interviewed who chose nursing as a career to pursue appear to have chosen it by default. They assert they do not have the brains, the time, or the money to become a doctor or a teacher. They see themselves as at least moderately intelligent, and they aspire to higher social status than that associated with sales and clerical careers. Therefore, it is nursing they select. On the other hand, other girls I have interviewed demonstrated that they are deeply involved in performing health services for humanity--they see themselves as fitting into society and bettering themselves by doing good for others. Too often, leaders in the field disdain commitment as idealistic and romantic kid stuff. However, commitment is a source of vitality in any profession. It is like the battery of a car.

In addition to commitment, there are the symbols that nurses use. Nurses speak several languages. Among these are the languages of chemistry, biology, and mathematics. The larger a nurse's vocabulary, the more successful we can expect her to become. One source of chagrin to all personnel workers is the large number of failures and dropouts in professional schools. More than embarrassment to personnel workers is the feeling of worthlessness that the failing student carries with him during late adolescence, a most trying period, and perhaps into adulthood. Moreover, the loss to our economy of human resources that might have been used productively is incalculable. The health services fields are making increasing demands on the member professions to upgrade their educational programs. Today's nurse must know more than yesterday's nurse. To meet the pressing personnel demands, to upgrade nursing programs, and to prevent the waste of human resources, certain suggestions are offered.

Many enrollees in a nursing program have a romantic notion of the nursing service. Why not introduce the youth to nursing when he or she is about to enter the 11th grade, the time when career plans begin to crystallize? This introduction will acquaint the youth with hospital procedure, nurses' discipline, as well as the trials and joys resulting from serving people. There are curricula already developed for training nurses' aides. A youth on the threshold of being a junior in high school could become a productive member of the health services team by taking a nurses' aide course. The hospital experience is real. Any commitment to the profession acquired at this time is real. A staff nurse assigned to work with a future nurse, moreover, serves as a model nurse to emulate. During the junior year, the uniformed future nurse would be expected to work for pay 25 hours each month. Those who did not fit in the career would know this and explore other careers. At this time, the supervising nurse could judge whether the aide would best continue functioning as an aide, become a practical nurse, or pursue an educational course leading to a diploma in nursing. Hence, an early selection of some of the nursing manpower could be made. During the following summer, the persons selected to be future nurses would be given training in the more technical aspects of nursing: introduction to asepsis, pharmacology, and nutrition. After this experience, the person considering nursing as a career would decide if he or she takes to the work, and again, the supervising nurses could make a selection of those whom they felt could go on to a diploma program in nursing. What if a youth has a bent for nursing but cannot master the vocabulary? Remedial reading and developmental vocabulary courses for nurses could be considered during the senior year in high school. Hence, any gaps identified during the previous summer could be filled during the academic year, either by the nursing school or in conjunction with the public high school.

What these two summer programs offer to the prospective candidates are opportunities to explore their chosen careers prior to professional training experiences. These programs recruit and screen prospective trainees; thus, it is predicted, failures will be reduced; quality of the nursing service will be improved; and the student involvement in the nursing profession will increase.

The nurse works on a team with doctors, pharmacists, aides, and orderlies. The person who interacts as a member of a team rather than sets himself or herself apart from the team, it is predicted, makes the more judicious decisions. Such a person has no need to impose his or her will and authority on others. The decisions made will not reflect personally biased beliefs but beliefs for which there is scientific support. The team members offer each other information, stimulation, and feedback that sharpen the skills of one another.

The person who has an urge to know more has a wider range of information from which to select in order to make competent decisions. How knowledge grows is a topic of great importance. Suffice it to say here that knowledge grows most rapidly when it can be classified and when the classifications can be used in any human transaction calling for reasoning. Merely amassing facts or developing classifications, though, does not predispose one to knowledge expansion. We see only what we already believe. In a classic research study, five chest experts examined 1, 256 radiograms and classified each as positive or negative for tuberculosis.[1] The experts differed among one another. One expert picked out 56 positives and another 100. More important, looking at the same x-rays two months later, not only was there disagreement among the experts but the experts differed with their own previous evaluations. One expert picked 59 positives the first time but 78 the second. Not only must one learn how to classify but, equally important, one must learn how to check a classification to determine if it is correct. During the pretraining courses already recommended, opportunities could be provided to develop hypotheses, to test them by using the most truthful and dependable tools, and to check findings.

Students are the raw materials with which teachers work to produce more competent decision-makers. Pretraining experiences were recommended to engender selection of future nurses with commitment, to encourage development of the vocabulary nurses use, to become familiar with the roles nurses assume as members of a team, and to stimulate the urge to seek knowledge. One might also speculate that such pretraining experiences might give the future nurse a good reason to learn more while in high school.

Process

The enrollee goes through an educational process. Certain techniques are applied to produce the output--in this case, improved decision-making. The student is exposed to lectures by nurses and doctors, is given laboratory experience in applied chemistry, is given hospital experience, is given term papers to write, and takes tests. Everyone knows we do these things because they have always been done. Let us not be content, though, to adopt without reservation what has been done in the past. Rather, we must constantly reexamine the profession in order to regenerate it. Most people will agree that the way we teach nurses influences how competently they make professional decisions. Therefore, certain features and content of the instructional process will be discussed. These include timing, organizing, and the content of an instructional program.

Timing. The instructional value of on-the-job training is recognized. Such training also heightens interest. By balancing work with study, a trainee compares ideas developed from classroom and laboratory activity with what goes on in the clinic and the ward. To be fully comprehended, an idea requires time for reflection. The student who rushes to floor duty from a class in pharmacology sets ideas aside and, therefore, has wasted her time in class and not gotten any closer to the outcome of the program. She needs time to think about the ideas, to fit them in with what she already knows. This fitting in permits the formation of more precise criteria with which decisions may be made.

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[1] Birkelo, C.C., et al. "Tuberculosis Case Findings." *J.A.M.A.* 1957, pp. 133,359.

Psychologists have found that distributing the practice, or stretching out the time, leads to greater retention of an acquired action than does massing the practice, or concentrating the time. To enact a competent decision, spreading out the time for instruction would be recommended. Might a nurse study eight weeks and work eight weeks? Sequence of practice on materials that are similar but not identical leads to "interference" and probably is the cause of confusion in remembering facts. What this suggests for nurses' education is the arrangement of instructional activities so that subsequent knowledge-gathering does not interfere with the recall of earlier accomplishments. We also know that when a rule is mastered, it facilitates the acquisition of new behaviors that exemplify the rule. Therefore, if a second activity cannot be arranged in any other sequence, it is vital that relationships common to consecutive tasks be pointed out. Too often, college students take courses without seeing any similarity in principles among them. Therefore, it is important to point out the relationships among consecutive tasks. Finally, there is an orderly sequence of presenting tasks so that the acquisition of each requires a minimum amount of time for mastery. One can only speculate about which course comes first, which next. Thus, the curriculum builders have their task cut out for them.

Organization. The organization of curriculum is considered next. Students need to classify ideas and practices prior to making competent decisions. However, they must first know the ideas and practices before they can classify them correctly. The vaguer the idea and the less defined the practice, the more you can expect the student to enact behavior that seems right to him but is likely to be viewed quite differently by the instructional staff. Where do they get these ideas? Books provide a wealth of information. Assigned readings followed by class discussion not only teach ideas but also provide opportunities to check them. The instructors through their lectures suggest ways of classifying ideas. The reading-discussion-lecture organization is especially profitable for the ideas that are more difficult to grasp. The independent reading technique is valuable in lieu of assigned reading when all students are not expected to master the same ideas. The technique of programmed instruction is economical, for the instructor's time can be reallocated for teaching concepts that are more difficult to grasp. A programmed instruction text teaches a student sets of relationships among ideas by exposing him to an incomplete thought, having him hunt for the complement, and then having him check in the programmed text to see if the complement selected is correct. The text, moreover, is organized so that successive ideas, called frames, have a logical relationship to one another. The demonstration gives the future nurse insights that reading could only inefficiently produce. Observing the insertion of a catheter is productive of more information than merely reading about it. Occasionally, it is not possible to prepare an exhibit enabling the trainee to observe everything; in such cases, films of nurses performing specific functions are almost as informative. Finally, acting out the behaviors associated with a nurse's function has the most informational value.

Content. Finally, curriculum content of an educational program in nursing is considered. While this is almost the sole province of nurse educators, I would like to assert the view that technical operations corresponding to biology, chemistry, physiology, nursing care, and pharmacology are important. But a nurse also has to know sociology, because she comes in contact with ethnic and economic groups with differing behavior codes and traditions and modes of behaving. Reading about these behavior codes is not sufficient. Assignment to a public health clinic with visits to homes would teach the nurses much about what the true values of the people from the various ethnic and socioeconomic groups are. The culturally disadvantaged are by far the least understood group of people. Newspaper accounts of the culturally disadvantaged, moreover, often lead the reader to infer that such people have no values or have developed values that are antagonistic to the social code adopted by most people. The nurse who visits their homes may be shocked by the conditions that exist in them, may be touched by the economic disadvantages experienced by most of these people, but above all, will learn that her values are not too different from theirs. Through these experiences, she will learn how to communicate with the culturally disadvantaged. Her values, moreover, shake hands with the values of the families she is visiting. She will learn how to communicate with unerring precision with people who have a variety of linguistic codes: the physician, the nurse, the pharmacist, the rich patient, the poor patient, the Negro, the Caucasian. Finally, knowledge of the economic foundations of an institution will teach her a greater appreciation for the point of view of the hospital, industry, or school administration. These are but a few of the main content areas to consider in designing a balanced nursing education program.

FEEDBACK

The last station in the system of nurses' education to be discussed is the feedback agency. Feedback is designed to correct actions that take place during a training period so that there will be efficiency in the output. Feedback is connected to the process as well as to the professional training programs recommended. It contains the correct ways of acting out. Information flows to a trainee to get him to adjust his practices to conform to the standards. Classroom tests are given with this in mind. Too often, though, they do not accomplish this because a student is never informed of what the particular standard is. He is only given a grade that contains no information about the relationship between the behavior demanded of him and the standard. Many of the methods identified under organization have inherent feedback agents. Programmed instruction texts are constructed to give feedback to students. Class discussion gives a student feedback. A lecture organizes the feedback. Classifications to be incorporated by students contain the standards by which behavior is controlled. The demonstrations contain visual clues that give feedback to ideas that the nurse has already developed. Performing an act, though, and seeing what happens afterwards is perhaps the best feedback practice, resulting in the most efficient acquisition. Using a stethoscope, visiting homes, and sterilizing instruments provide cues that change student behavior to a far greater extent than merely reading or discussing in class. A vital aspect of the making of competent decisions is delivery of corrective feedback after the future nurse performs an act that has involved the making of a decision.

There is another aspect of feedback that cannot be overlooked. When a person learns that he has done something incorrectly and is presented with the correct way of doing things, he will try to perform the act correctly at his next opportunity. Moreover, the individual who is told he has done something right not only tries to perform this same act in the same way the next time but also feels good about himself out of the knowledge that he has done something well. We say it makes him self-confident. This feedback, then, also has the effect of charging up the battery that keeps him going. He is propelled to increase his activities that have led to self-enhancement. Knowing that one has made a correct decision then, increases one's urge to make other competent decisions.

SUMMARY

In summary, nursing education has been viewed as a system designed to produce the making of precise and rapid decisions. To produce this outcome, timing, organization, and content of the curriculum and the method of feeding the correct answers to the student nurses can be so contrived as to result in competent decision-making. The potential value of the systems of approach is that the several agencies within the system work together to produce competent health services to society that nurses are educated to perform.

THE IMPACT OF TECHNOLOGY ON EDUCATION

Stanton W. Saltzman

In the past 15 years, the field of communications has grown faster than any other field, with the possible exception of education. The impact of technology on education . . . that might very well be reversed. We could call it the impact of education on technology. Let me be certain that I am communicating with you. What I mean is that the development of any new technology depends greatly on trained individuals with active curiosities that demand experimentation. This is true in economics, sociology, medical research, nursing, and all of the other social and physical sciences that affect the life of man.

The history of communications is long, and like so many other rapidly developing methods of information dissemination, mistakes have been made along with the progress. The first technological advance that had a direct and important impact on education was, of course, the invention of the printing press. The ability of man to reproduce on a large scale ideas and general information was the initial spark that has today created the communications gap, for the number of scientific and educational journals available to the practitioners of any discipline has increased to such an extent that it is almost impossible for any serious person to conscientiously keep pace with the latest developments in his direct or an allied field.

I shall summarize for you the technology that is available to you as educators, its advantages and disadvantages, and some new and some future developments. In preparing to do so, I had to make a decision as to the possible use of resource equipment, and I decided to use none. It might seem strange that a professional communicator, involved with the use of such equipment each and every day, would decide not to use it in a presentation concerning its impact on teaching. There are a number of reasons for this.

First, all of the instructional devices presently available (and there are a good many of them) are only as good as the manner in which they are programmed. (I use the term "programmed" in its broadest sense. We shall discuss this later.) Second, I do not want to give the impression that any one or two mechanical devices are better than the rest, and realizing that I could not bring all of the devices with me, I decided to bring none of them. In the final analysis, it is not the type of equipment that is used, but how it is used that is important. I have found through experience that certain devices work better than others in various situations; these are some of the experiences that I would like to share with you. I know that I am going to cover a great deal of territory, and knowing--having attended similar professional meetings myself--how difficult it is to try copying down the words of the speaker, I suggest that you just try to get the flavor of what I am going to say.

I will divide my talk into three parts: projective technology, electronic technology,

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and transistorized technology. As you can well imagine, these various technologies are often intermingled and are at times most difficult to separate into neat classifications, and so the divisions as I have labeled them are purely arbitrary ones.

I would say, first of all, that the particular technology with which we are most familiar and probably use the least effectively is projective technology. Projection equipment of all types has been with us for quite some time. With the perfection of the kinetoscope by Thomas Edison in 1887, motion pictures became a reality, and a practical method of recording images that moved on film was evolved. When you consider the vastness of time, the past 79 years are minuscule, but the developments that have taken place in the field of motion picture photography and projection within those few years are phenomenal.

All of the developments in the past eight decades have encouraged educators to use motion pictures as an effective and inexpensive instructional resource. The changes in the physical size of film itself is a good example. For years, the standard format was 35 millimeters in width. This format made it necessary to use large, bulky, and very expensive cameras and projectors, thereby making it difficult for the educator to consider film as a method of instruction. An evolutionary development decreased the film size to 16 millimeters, enabling the use of smaller and less expensive equipment. Many educational institutions now had ample justification to develop their own motion picture departments, which could plan, produce, and evaluate films made for very particular and specialized instructional uses. With the advent of home movies and an increase in amateur photographers brought about by the evolution of 16 millimeter film, a still less expensive method of film-making was sought. The desire to take pictures of primarily family experiences that would be relived vicariously brought still another change--the 8 millimeter format. The ease with which 8 millimeter film and cameras can be used by the average person has now made it possible for educators to plan, produce, and edit their own films for a variety of situations. The single-concept film is a somewhat new idea that has inflamed the imagination of educators across the country. The single-concept film is fairly self-explanatory. An entire course or procedure can be broken down into conceptual units; these units can be placed on film, each concentrating on and illustrating a specific point, and they can be used in a projector that will allow immediate repetition whenever required. Programming techniques can and should be employed to lead the student through a set of specified behaviors designed and sequenced to make it more probable that he will behave in a given desired way in the future. The cost of 8 millimeter film production is so low (cameras can be purchased for less than $100) that practically any teacher can make films to be used exclusively as an integral part of his curriculum unit. Perhaps the leading exponent of the single-concept film is Professor Louis Forsdale of the College of Education at Columbia University.

A still newer development in the 8 millimeter area is the so-called Super 8. This is regular 8 millimeter film with more of the film space being used for the enlargement of the picture frame. The new size gives approximately 50 percent more picture area. This new development, however, has brought certain complications that one must consider before expending monies for film production. A special camera, special film, and a special projector must be used. The cost of these three items is certainly not prohibitive, but thought should be given to equipment presently on hand. If you are contemplating the use of 8 millimeter film and you do not presently have any equipment, you should consider Super 8 carefully, for it might become the standard film for future use.

Eight millimeter film can be projected in various ways. The standard type of projector is threaded in the manner familiar to most of us and then projected on a screen at the front of a classroom. The majority of the major manufacturers of 16 millimeter projectors also make 8 millimeter projectors. One of the newer facets of 8 millimeter projection is the cartridge-load type. After the film has been produced and edited, it is loaded into a plastic cartridge in a continual loop fashion; this eliminates the need for threading the film each time it is used. After the film has run through its entire sequence, it is immediately ready for reuse. The advantages of this are apparent: hands never touch the film, no great tensions are placed on the film as are on the normal type of threading, and no rewinding is necessary. This allows for extremely simple operation; a person with no mechanical aptitude whatsoever has no trouble in operating one of these machines. There are two types of projection systems used with the cartridge-loaded projectors, front projection, as described previously, and rear projection. Rear projection utilizes a series of mirrors that reflect the film image onto a coated screen that is an integral part of the projector. It is much the same experience as viewing a television screen. Cartridges currently on the market hold from 4 to 26 minutes of film, depending on the brand of projector being used. A magnetic strip can be affixed to the film after it has been processed and edited, allowing for the addition of sound to the film.

Other devices within projective technology are perhaps more familiar to you. I refer to the various slide, overhead, and opaque projectors. It is not my intent to list various models for you; I will, however, summarize the uses to which these projectors can be put and suggest further uses to which they should be put.

For many years, the lantern slide has been the standard used by the vast majority of educators. The familiar 3¼" by 4¼" slide has both its advantages and disadvantages. The picture projected is usually a very good one due to the physical size of the slide itself. In all instances, the larger the slide, the better the picture resolution. You should all be aware that the photographic process is in actuality the placing together of a series of dots of silver nitrate. When these dots are exposed to various shades of light, a photograph results. When projected, these dots are magnified, so that if you were to project an 8 millimeter film in a standard-sized movie theater, the picture would appear "grainy"--the dots would be pulled apart to such an extent that you could actually see them. The same phenomenon occurs with slides.

The present development of 35 millimeter roll film has reached a refinement that allows the educator to perhaps turn from the bulky lantern slide projector, which allows only 2 slides to be loaded at a time, to the modern 2" by 2" slide projector that can hold upwards of 80 slides at one time. These modern projectors can be operated by remote control; they can be combined with an audio tape recorder to produce programmed sequences; and some models have timing devices allowing for completely automatic operation. The production of 2" by 2" slides can also be accomplished by the educator himself. New developments in 35 millimeter photography and cameras make it possible for almost anyone to operate such devices. The new "electric eye" cameras simplify the entire process for those who have no inclination or ability to understand "f" stops, light meters, ASA ratings, and the rest of the procedures known to professional and educated amateur photographers.

The making of 3¼" by 4¼" slides has also been simplified. The Polaroid transparency film pack speeds up the production of lantern slides a hundredfold. With this versatile instrument, a teacher can take a picture of material to be transferred to a slide and within a few minutes know whether or not he has been successful. Mounted in plastic, these slides are light in weight and can be projected immediately. I might add that 2" by 2" slides can be accomplished with the same Polaroid film.

Now the question will be asked, "Okay, which one do I use?" As I have pointed out in my opening remarks, we should be more concerned with how a particular medium of instruction is to be used rather than which medium to use, and so it is with the type of slide projector selected for use. The instructional problem comes first. If, for instance, you have to prepare slides for a large group presentation that will take place in an auditorium, you might very well consider the use of the lantern slide projector, since the projection thrown will in all probability be a long one. If you are planning an instructional unit that will include a long sequence of pictorial information, perhaps showing the step-by-step operation of a procedure or a piece of equipment, you should keep in mind the advantages of the 2" by 2" projector with its large slide capacity and ease of operation. If you are planning to use some slides in a presentation but do not particularly care to save the slides for future use, you should keep in mind the speed with which you can produce Polaroid transparencies. In the final analysis, looking at the problem very realistically, your decision as to which type of slide projector to use will depend on what equipment is available to you. In the optimum teaching situation, we should have facilities for the production of all types of slides in order to facilitate the solving of particular instructional problems.

There are a number of other devices that we can classify as part of projective technology. I will briefly mention some of them and talk on one that has had a strong revival.

The filmstrip projector has been and still is used extensively in elementary and secondary education. There are many sources of professionally produced filmstrips that can be purchased by school systems and individual instructional departments. There are also filmstrips available that might fit into a curriculum unit in higher education but not to the extent of making the commercially manufactured filmstrip a flexible instructional resource, especially in undergraduate and graduate professional courses. It is possible to produce your own filmstrips, but it seems to me that if you are interested in producing sequential pictorial information, the 2" by 2" format solves that problem very nicely.

Another device is the opaque projector. It has been in use since World War II. It uses a projection method of reflecting the light from an opaque source (photograph, printed page, et cetera) through a lens onto a projection screen. The opaque projector is quite simple to operate and is very handy for those last-minute ideas that all teachers get one hour before teaching a class. It is, however, a rather large and heavy piece of equipment, and when used, the classroom must be darkened.

The overhead projector has surged into the forefront of communications instruments used in the classroom. It is simple to use, relatively inexpensive, and transparencies are simple to prepare. An acetate roll can be attached to most models, giving the teacher an almost endless writing surface. Lists and formulas can be prepared before the class period and rolled into view as they are presented in the lesson sequence. Overlay transparencies prepared and attached to a frame in sequence allow the teacher to project a complicated block of information step by step.

A recent development using polarized light adds the illusion of movement. Many imaginative uses of this novel device have been incorporated in a number of subject areas. For instance, transparency sequences indicating arterial and venal blood flow and time and temperature diagrams are just two possibilities in the health sciences.

There are also a number of manufacturers of commercially prepared overhead transparencies covering the range of most subject areas. But, like the commercial filmstrips, not enough of a demand for specialized topics has occurred to justify mass production of professional course materials. There are several distinct advantages to the overhead projector that I might point out at this time. First, the teacher faces the class and speaks directly to the students while projecting materials; second, the projector can be used in a fully lighted room; third, once a transparency is made, it is permanent--it cannot be accidently erased nor will it fade with time and usage; fourth, the projectors are light enough in weight to carry from classroom to classroom if necessary; fifth, the overhead projector has an advantage in the size of the stage or surface from which the transparency is projected--the usual stage size is 10" by 10", thereby allowing a great deal of information to be projected at one time.

One can only speculate on the future developments of projective technology. One might imagine projectors that will be smaller and lighter in weight with stronger light sources allowing projection in any situation. Future refinements of microfilms and microdots will aid in reducing the problems of the storage and access of information. Future developments in the making and projection of motion picture film will probably move toward higher fidelity of the picture image and cameras that will be easier to use. You, as teachers, can be very instrumental in influencing the design of new equipment. Manufacturers are always attuned to the desires of users for equipment changes and advances. As you work with various kinds of equipment, you may want to see changes made in design that will facilitate particular uses that you have in mind. Indicate these desires to the manufacturers. Many technical developments in the past have occurred in just this fashion.

I think we should move on to the second technology that I indicated earlier--electronic technology. In Martin Mayer's book The Schools, he notes, "More money was spent on educational television during the 1950's than on all of the other new school procedures combined." Perhaps I am more familiar with electronic technology than you are, having been involved in radio and television production for the past ten years. The history and development of television in education is a fascinating one and is still in the making. Several times each week, I receive information concerning new and imaginative uses of television by educators across the country.

Educational television is almost 15 years old, and it might be said that it is behaving like any typical teenager, not quite sure just who it is and in which direction it wants to move. The leading role in the growth of educational television during its first decade was played by the Ford Foundation and its fund for the advancement of education; its grants of over $20,000,000 made it possible for the potential of educational television to be explored in depth at every level. A number of research studies have been conducted to test the question, Can television teach students as well as conventional classroom methods? Dr. Roscoe C. Brown, Jr., in A Guide to Instructional Television, states, "The overwhelming majority (almost 90 percent) of gross comparisons between television and conventional communication conditions show no substantial difference in achievement or information gain." Moloney and Donner, in Educational Television--The Next Ten Years, have this to say:

> A perusal of any research summaries shows the enormous repetition of this question (referring to television teaching as well as conventional methods). And as a result we now know that television can be used to teach high school students,

> elementary pupils, the Army, the Navy, college students, housewives, student teachers, and IBM salesmen. It can act as a conveyor of learning for subjects including home nursing, physics, algebra, dressmaking, college composition, typewriting, psychology, and maintenance of military telephones. It can do this amazingly enough in Florida, Alabama, Pennsylvania, Illinois, and even Canada, England, and France. And apparently students can learn at 6:30 a.m., noon, late afternoon, the early evening, or late at night.

A number of other studies have been conducted on student and faculty attitudes. These may be summarized as follows. Students tend to be somewhat negative in their initial attitudes toward instructional television. After experience, attitudes become more favorable. In a recent study conducted at the University of Illinois, it was found that students rated television used for specific instructional purposes (image magnification in agronomy and engineering courses) somewhat higher than television used to present straight lectures. More research and study of student attitudes is certainly called for so that we might more intelligently make decisions concerning the proper uses of television. Kumata in 1960 concluded that "attitudes toward TV and learning as measured by achievement tests are not related." If they were related, Kumata reasoned, then "The TV student should learn less, since he usually has a negative attitude toward the medium." Faculty attitudes have varied greatly but tend to be less favorable than those of students. Surveys generally have shown that there is a small group with negative attitudes, another small group that is favorable toward television for teaching (most television teachers are usually drawn from this group), and a large group that appears to be indifferent toward it.

Most of the current investigation and use of television is focused on trying to improve the effectiveness of learning by this means and on developing new ways of using the medium for solving problems faced by education. The uses include television in laboratory instruction, for observation of teaching demonstrations, for presentation of lifelike test situations, and for bringing a wide variety of learning situations into the classroom.

Let me briefly list for you some of the experimentation in the use of television to improve instruction.

One of television's most valuable assets is that of observation. In teaching education, many students can observe an experienced teacher in action. This is accomplished by taking small mobile television units, cameras, and videotape recorders into schools all over the United States. The ability of students to see actual classroom behavior enables them to better understand the problems of both teacher and student. An added benefit of this use of television has been brought about by the ability of the teacher to edit videotapes. This allows for the tying together of a series of related actions that a teacher wants to use in the classroom. An example of this use is one in which a television unit might videotape eight hours of observation 50 minutes of which will be extracted and used as an instructional unit. The exact experiences that the teacher wants to stress can thereby be assembled without having to take the teaching students out into the schools where viewing situations are usually less than adequate.

In science courses and professional school laboratories, procedures and techniques are improved and expedited by using television. This is done in several ways: (1) image and microscopic magnification; (2) improved visibility and audibility for many students; (3) carefully structured and prepared demonstrations with excellent illustrative materials recorded on videotape and played back to several sections--aiding the uniformity of instruction so necessary in laboratory courses; (4) procedures can be observed and repeated immediately by the students; (5) students can be eliminated from situations in which their presence might be distracting or even dangerous; and (6) students can use an observation as a basis for discussion.

Schools of medicine, dentistry, nursing, veterinary medicine, home economics, and law are making fascinating and extensive use of television. In medicine, departments of anatomy, psychiatry, surgery, dermatology, physiology, microbiology, pathology, pharmacology, and radiology are using television successfully.

Television is also being used as a critique teaching tool. In any academic area where a student's performance or application of techniques is important, the student with his teacher, with other students, or individually can view his own performance. Student teachers and students in clinical situations and in the performing arts can benefit from this use. At the Temple University Health Sciences Center, the department of comprehensive medicine is currently experimenting with this use of television to aid senior medical students in interviewing techniques.

Let me tell you of some interesting uses to which various American universities are putting television for the improvement of instruction. At Bowling Green State University, a speech course is taught to 2,200 students by two faculty course directors doing the core lectures and other members of the department doing the enrichment lectures. By taping the lectures and having half the enrollment view lectures while the other half makes speeches in small classrooms, the theory content of the course has been doubled without reducing the number of student speaking experiences.

The University of Missouri is experimenting with recorded, variable, individual, lecture-length programs with immediate live follow-up by the television professor in a large lecture hall seating 500 and equipped with 11 monitors.

The University of Colorado is presenting the lecture portion (which is on tape) of their public speaking course during out-of-class time, thus freeing class time for more student speeches and evaluations.

A growing use of tape appears to be the development of small departmental libraries of course-related demonstrations. Eastern Michigan University is building a library for the special education staff that includes demonstrations of physically and mentally handicapped and speech-defective children. For elementary and advanced courses in psychology, the University of Georgia is preparing dramatic portrayals of the major forms of mental illness. A case study file of guidance and counseling tapes is being prepared at Georgia, featuring graduate counseling majors interviewing role-players who have preplanned situations and problems.

The University of Missouri has prepared several instructional units for the health sciences. For its school of nursing tape library, recordings of normal births; demonstrations of scrubbing, gowning, and gloving; and a nurse--expectant-mother interview have been made. The department of microbiology has found that a 30-minute tape demonstration of the use of a microscope with immediate application is as effective as three one-hour laboratory periods.

Eastern Michigan University is recording a series of therapy sessions that shows the progression of a stutterer throughout therapy. In speech pathology and audiology at Auburn University, a library of case studies has been developed over the past two years.

Taped group therapy sessions are being developed at the University of Colorado, Eastern Michigan University, and Sacramento State College.

Research and development of televised instruction are being conducted by a number of universities. An interesting application in this category is that of course development and the application of learning theory to televised instruction. A simplified description of the procedure follows. An instructor sets down measurable course objectives. Next, the instructor and the producer/director develop the course with these objectives in mind (at Illinois, a programmed instruction man is included in the development). The course and its objectives are then produced and tested, and appropriate changes are made to further improve the effectiveness of the course.

At the University of Illinois, faculty are invited to have one or more of their lectures recorded in a classroom-studio located in the College of Education. The tape is then used for instruction and self-criticism by the teacher himself or with colleagues of his choice. Information gained from these experiences is used by the instructor as he sees fit. After viewing, the tapes are erased if the instructor so requests.

In the extension area, live closed-circuit television programs from medical centers to hospitals are being conducted in many states. These include daily broadcasts of several hours each day over closed-circuit lines from the medical school to hospitals in different parts of the states. These programs consist of lectures, demonstrations, and general medical conferences. They are intended for hospital staffs and practicing physicians and nurses in those communities.

These then are some of the uses to which universities and professional schools are applying television. I am sure that you are acquainted with other schools and their uses of this medium. We could go on listing new and imaginative applications of it, but I think we can see the potential of television as an instructional tool from the brief list just mentioned.

The picture, however, is not completely rosy. Instructional television has its detractors and its problems. The Ford Foundation and its fund for the advancement of education has made periodic examinations of televised instruction, and their latest report indicates that all is not well. Television is what the Ford Foundation calls "The Unfinished Experiment." The medium can take credit for helping understaffed schools to cope with ever-increasing enrollments, but it has not transformed education, nor has it significantly improved the learning of most students. In short, television is still far from fulfilling its obvious promise. Television is *in* education all right, but it is still not *of* education.

Most experts feel that the limitations on the use of television in education are not due to the medium itself but to a lack of imaginative boldness and talent in the people using it.

Throughout the country there is a feeling that instructional television is marking time, that in the mid-sixties the medium is at a critical turning point. Hartford Gunn, station manager of WGBH in Boston, sums it up rather nicely: "Far too much ITV transmits no more than a fuzzy image of a teacher teaching in a traditional way, using the traditional and impoverished resources of the classroom. There is too little experimentation and no rewards for it either. School people who try to use their imagination and bring the world into the classroom by TV have no way of tapping the resources they need. And the educational broadcasters don't know who these innovating people are."

Frederick Breitenfeld, Executive Director of the Maryland ETV Commission, states, "The focus seems to be shifting from television to *education*. . . . As the novelty of television wears off in our daily lives, educational television becomes, as it should, a part of education, and not simply a form of television."

Such reorientation in the role of instructional television means a shift in the emphasis on television as an instrument of mass instruction. It is that, of course, and can, like film, bring into the classroom the widest possible view of reality. Take, for example, a documentary on civil rights, the international programs beamed from Telstar, Robert Frost reading his own poems, the unforgettable scenes of President Kennedy's funeral, Pope Paul VI's visit to the United States, a mechanical heart implant by a Dr. DeBakey, the debate and teach-ins on Vietnam--it doesn't matter whether a student views these by himself or with five or six of his fellows or in a group of 100 or 500. But with instructional programs pinpointed in purpose and with television integrated into the classroom and made flexible, instructional television could be used for individual as well as mass instruction and for highly focused purposes in between.

In summary, instructional television is an educational tool whose basic effectiveness has been proved. But its ultimate contribution to the improvement of teaching and learning in America's schools and colleges remains to be determined. Like any tool, the uses to which instructional television is put and the results it achieves depend on those who work with it. On them, also, depends the usefulness, the variety, and the quality of televised instruction.

Instructional television seems likely to receive the resources that are needed to test its full potential. There is reason for measured optimism because of the favorable attitude displayed by the federal and state governments, the developing technology, and the emerging talents in the field--all may combine to help instructional television overcome its present crisis of quality and assume its rightful place among education's revolutionary tools.

The technical aspects of television can become complicated and cloud the more important issues of educational objectives. I want to briefly discuss various technical points that might give you a nodding acquaintance with television. There are three types of television cameras in use today. The commercial broadcasters use the image orthicon camera as their mainstay: this gives a sharp, well-defined picture at comparatively low light levels. The image orthicon is, however, an expensive camera. Educational institutions rely mainly on the vidicon camera, which is less expensive to purchase and to operate but requires more light to obtain good picture quality. More specialized uses can be found for the vidicon owing to the range in size and quality of cameras manufactured. A new camera using a plumbicon tube is now on the market and falls somewhere between the image orthicon and vidicon in both price and quality. It will be enough if you are aware that three types of camera systems exist.

I am sure that you have heard the term "distribution system." Let me quickly run over the types of distribution systems in operation at this time. There are basically two methods of distributing television signals from the cameras to the viewer--open and closed circuit. Open circuit is the type of reception you receive on your home television set. The broadcast station sends a signal on one channel through the air that is picked up on your home antenna and reproduced on your television set. In closed-circuit operations, the signals from the television cameras are sent over cables to receiving sets. The one large advantage that closed circuit has is that it allows more than one signal to be sent at one time. Naturally, this is a problem that an educational institution must consider during the planning stages of a television complex. There are other advantages and disadvantages of both open- and closed-circuit television systems; perhaps we can cover them in the question period.

The problem of color television is a complexing one. Research done in this area is often contradictory concerning the advantages versus the disadvantages of color. I suppose the largest disadvantage is money--cameras cost upward of $40,000 and color monitors are around $800 to $1,000. But even if money is available, careful thought should be given to the actual need for color. Do you need it to obtain the proper educational and behavioristic outcome? I cannot give you any pat answer; this is a question that you yourself must answer. But, please do not use color just because it is here or because you think it is necessary to use color in medical training--it could very possibly be more of a hindrance than a cure. I have appended a list of organizations to the end of my talk; these groups can give you all the assistance you need in planning for television. I will repeat a warning that people like you have used many times: When a problem occurs, seek professional advice. Don't try to diagnose your own ills. There is a great deal more to television and teaching than I have been able to tell you about. If I have been able to plant some questions in your mind and to make you aware of the complexities involved, then I am satisfied.

Let's turn, finally, to transistorized technology. This will be brief because the transistor is relatively new and the technology is still newer. The development of the transistor opened the door to the full-scale use of miniaturization. This marvel of electronic ingenuity made the man-in-space program possible, allowed pictures of the moon's surface to be sent 246,000 miles through space, made the large-scale use of computers practicable, and brought about the advent of communications satellites.

The last two achievements mentioned, the use of computers and the advent of communications satellites, have a direct bearing on future planning by educators around the world. There are more than 1,000 variations of current uses of the computer in our society. The impact and implications of these applications are certain and serious. It has become quite obvious that the speedy acceptance and expansion of computer utility will continue and that educators must sooner or later come to grips with the machine to learn control of it and not become ensnared by it. Everywhere, computer classes are expanding, and college and high school curriculum development reflects the demands of the students and industry. Temple University is currently conducting classes in FORTRAN, the language of the computer. I am certain that this is also taking place at most major universities around the country.

Let me briefly describe [illegible] some computer uses in the field of health science. The National Library of Medicine has one of the largest computers in the country, which is known as MEDLARS (Medical Literature Analysis and Retrieval System). Currently, the NLM has more than a million volumes. MEDLARS will permit doubling the size of the library index, increase the precision of cross-referencing, and automatically assemble special indexes on particular subjects. The logical extension of this system is an automated system for medical diagnoses, with a store of knowledge much larger than any doctor could manage. An example of the computer's prowess is that in five minutes it can perform the 70,000,000 computations necessary to analyze the changes in concentration of 56 blood elements resulting from one stress condition. Body functions are measured by converting any activity in the body to electrical impulses to a computer for measurement and display. This permits instant and continuous measurement of a patient's condition under circumstances where such monitoring is desirable. In controlled tests, computers diagnosed as well as or better than panels of doctors. In one instance, the computer was able to segregate what was previously considered one disease into four different diseases. As the computer gains experience in diagnosing a specific disease, the percentage of correct diagnoses approaches 100 percent--much better than human performance.

The computer analyzes EKG's in three minutes. It asks itself 5,000 questions on the EKG submitted for diagnosis. The results are 80 percent accurate as compared with the 50 percent accuracy of EKG specialists. Computer-operated artificial limbs perform complicated tasks such as eating on command from usable parts of the body. In the future, continuous monitoring of all individuals, healthy or sick, will be done with the aid of microelectronic devices. When these devices are implanted under the skin, they will feed information into a computer that will warn the individual when his symptoms are outside the norm.

Computers will someday be used as the most important diagnostic tool. Doctors estimate that it will take 800 man-years to program computers in the diagnoses of all known diseases.

The computer has already established its ability to teach more, better and faster than conventional methods of instruction, and educators have not yet begun to tap its potential. It permits maximum instructional efficiency. Using the appropriate routine and different approaches to the same concept, students with IQ's of 90 to 95 demonstrated that they could perform at the same level of proficiency as students with IQ's of 135 to 140. It greatly speeds the teaching process. Stenotype students learned as much in 50 hours of computer-assisted instruction as they had previously in 300 hours.

There are many who feel that time is moving too rapidly and that not enough thought is being given to the possible danger of the machines' "taking over." This is a continuing problem and one that I believe has been with us since the beginning of time. Each innovation has received the same cautious acceptance that in many ways retarded the full and imaginative uses to which the innovation could have been put. But man usually discovers that he is, after all, still the master of his destiny and that the machines are still his servant.

The communications satellites have taken us one step closer to a one-world concept. The ability to communicate instantaneously with people on the other side of the globe has ramifications that are probably not even dreamt of by most of us. Think of the possibility of great health centers' conducting consultations with isolated and backward areas of the world. Imagine the thrill of students being able to watch some of the great surgeons and teachers of our time at the very instant they are performing an intricate operation or are explaining a new concept of research.

It seems as though we have come full circle in the uses of technology in education. What will come next? Who knows? Experiments with laser beams and holography to produce true three-dimensional images almost staggers the imagination. How much faster will we progress? Will we remain manacled by our own self-doubts that make us resist change or will we allow our minds to experiment and test new concepts of education? Or will we, on the other hand, accept too readily something new just because it is new? All of these are important and difficult questions, and the answers are just as important and difficult. Fred Friendly, professor of journalism at Columbia University and consultant to the Ford Foundation, speaking on the advances of communications satellite technology, predicted that 1967 would be the year that distance died; I would like to add that 1967 will be the year that real educational innovation was born.

Bibliography

Barker, Caryl-an D., ed. Improving Instructional Television. National Association of Educational Broadcasters, Washington, D.C., 1965.

Baskin, Samuel, ed. Higher Education--Some Newer Developments. New York, McGraw, 1965.

Brown, James W., and Lewis, Richard B. A-V Instructional Materials Manual, 2nd ed. New York, McGraw, 1964.

Brown, James W., and Norberg, Kenneth. Administering Educational Media. New York, McGraw, 1965.

Costello, Lawrence F., and Gordon, George N. Teach With Television. New York, Hastings House, 1961.

De Kieffer, R. E., and Cochran, Lee W. Manual of Audio Visual Techniques, 2nd ed. Englewood Cliffs, N.J., Prentice-Hall, Inc., 1962.

Design for ETV-Planning for Schools With Television. Educational Facilities Labs. New York, 1960.

Diamond, Robert M. A Guide to Instructional Television. New York, McGraw, 1964.

Green, Alan C., ed. Educational Facilities With New Media. National Education Association, Washington, D.C., 1966.

Guide to Support Programs for Education. Visual Products Dept., 3-M Company, St. Paul, Minn.

Schultz, Morton J. The Teacher and Overhead Projection. Englewood Cliffs, N. J., Prentice-Hall, Inc., 1965.

Sippl, Charles J. Computer Dictionary and Handbook. Indianapolis, Ind., Howard W. Sams & Co., Inc., 1966.

Sparks, Richard R. A Bibliography of Doctoral Dissertations in Television and Radio. Syracuse University, Newhouse Communications Center, 1965.

Steinberg, Charles S., ed. Mass Media and Communications. New York, Hastings House, 1966.

Taylor, Calvin W., and Williams, Frank E., eds. Instructional Media and Creativity. New York, Wiley, 1966.

Associations

National Association of Educational Broadcasters
1346 Connecticut Ave., N.W.
Washington, D.C.

Council on Medical Television
Box 3163, Duke University Medical Center
Durham, North Carolina 27706

DAVI (Division of Audio-Visual Instruction)
National Education Association
1201 16th St., N.W.
Washington, D.C. 20036

APPENDIX--WORKSHOP PROGRAMS

MIDWEST B REGIONAL WORKSHOP

Statler-Hilton Hotel
Detroit, Michigan
October 31-November 1, 1966

Monday, October 31

9:00 a.m.	Purpose of Workshop	Julia B. Fishbaugh, Regional Vice-Chairman
	Welcome	Mrs. Gilbert Pingree, President, Michigan League for Nursing Helen Wenning, Chairman, Local Committee
9:45--10:45 a.m.	Philosophy, Facts, and Trends in Secondary Education	Dr. Roland Faunce, Secondary Education, Wayne State University
11:00--12:00 noon	Discussion	
2:00--4:00 p.m.	Characterizing the Student	Dr. Florence Jacque, Field Executive Region 5, Detroit, Michigan

Tuesday, November 1

9:00 a.m.	Philosophy and Method of Team Teaching	William Tillman, Curriculum Coordinator, Lamphere Public School System, Madison Heights, Michigan
10:00--10:30 a.m.	Discussion	
10:45--11:30 a.m.	Business	
1:00--3:00 p.m.	Televised Teaching	Harriet Koch, Project Director, Chicago Video Nursing
3:00--3:30 p.m.	Summarization	

MIDWEST A REGIONAL WORKSHOP

Leamington Hotel
Minneapolis, Minnesota
November 3-4, 1966

Thursday, November 3

9:00 a.m.	Purpose of Workshop	Carol Randall, CMA Vice-Chairman
	Welcome	Grace Terry, Executive Secretary, Minnesota League for Nursing
		Ruth D. Weise, Chairman, Local Committee
9:45--10:45 a.m.	Philosophy, Facts, and Trends in Secondary Education	Dr. Clifford P. Hooker, Chairman, Department of Educational Administration, University of Minnesota
11:00--12:00 noon	Discussion	
2:00--4:00 p.m.	Factors To Be Considered in Long-Range Planning for Nursing Education in Your Community	Sister Ann Joachim, Director, St. Mary's Junior College, Minneapolis, Minnesota

Friday, November 4

9:00 a.m.	Televised Teaching--Planning, Use, and Effectiveness	Dr. Lois D. Anderson, Coordinator, VNE-KTCA-TV, St. Paul, Minnesota
10:00--10:30 a.m.	Discussion	
10:45--11:30 a.m.	Business	
1:00--3:00 p.m.	Experiment in Curriculum Change	Sister Anne Frederick, St. Michaels Hospital, Grand Forks, North Dakota
3:00--3:30 p.m.	Summarization	

SOUTHERN REGIONAL WORKSHOP

Sheraton-Charles Hotel
New Orleans, Louisiana
November 7-8, 1966

Monday, November 7

9:00 a.m.	Purpose of Workshop	June Wilson, Regional Vice-Chairman
	Welcome	Helen Meyer, First Vice-President, Louisiana League for Nursing Sister Blanche, Chairman, Council of Schools Sister Gerald, Chairman, Local Committee, Charity Hospital
10:15--10:45 a.m.	Overview	Dr. Melvin L. Gruwell, Director, Center for Teacher Education, Tulane University
10:45--12:00 noon	Symposium	Dr. Louis Barrilleaux, Professor of Secondary Education, Tulane University Dr. Glenn Hontz, Director of Undergraduate Studies, Tulane University
	Audience Participation	
2:00--3:00 p.m.	Demonstration--Educational Media	Dr. Emma Plattor, Assistant Professor of Education, Tulane University
3:15--4:30 p.m.	Demonstration--Computer, Programmed Learning, and Teaching Machines	

Tuesday, November 8

9:00 a.m.	Classroom Methods and Management (a) Evaluation--Grading (b) Presentation of Materials (c) Method and Teaching Models	Dr. Melvin L. Gruwell and Staff
10:45--12:00 noon	Group Meetings	
1:30--2:00 p.m.	Group Reports	
2:00--3:00 p.m.	Summary	Dr. Melvin L. Gruwell
3:00--3:30 p.m.	Announcements and Business	

WESTERN REGIONAL WORKSHOP

Biltmore Hotel
Los Angeles, California
November 10-11, 1966

Thursday, November 10

9:00 a.m.	Purpose of Meeting	Sister Mary Raphael, Regional Vice-Chairman
	Welcome	Walter Hoefflin, Vice-President, Unit E, Local League for Nursing Julia Shaughnessy, Chairman, Local Committee
	Announcements	
9:30--10:15 a.m.	Faculty Dynamics Toward Effective Teaching	Walter Coulter, Ph.D., Queen of Angels School of Nursing
10:15--10:45 a.m.	Discussion	
11:00--1:00 p.m.	Altering One's Approach	Jean L. Hopkins, Moderator, Joint Project Director, Southern California Diploma Programs
	Films for Independent Study	Margaret Souza
	Team Teaching	Mary Varro
	Time Boundaries	Mary Arakawa
	Programmed Instruction	Virginia Malley
	Critical Thinking	Mary Dickason
	Problem-Solving	Didine Shuttack
2:30--3:30 p.m.	Small Group Discussions on Panel Topic	
3:30--4:00 p.m.	Audience Response and Questions	

Friday, November 11

9:00--10:30 a.m.	Open Forum--Teaching Dynamics	Lillian DeYoung, Chairman
	Psychiatric Nursing	Nancy Sanford, St. Luke's Hospital, Denver, Colorado

WESTERN REGIONAL WORKSHOP--Continued

	Programmed Instruction	Theresa Geis, St. Luke's Hospital, Denver, Colorado
	Use of the Conference	Marilyn Weber, Deaconess Hospital, Spokane, Washington
	Preventive Pediatrics	Eileen Merrell, St. Alphonsus Hospital, Boise, Idaho
10:45--11:30 a.m.	Audience Discussion on Open Forum	
11:30--12:30 p.m.	Film--Pre-and Post-Assignment Conferences	
2:00--2:45 p.m.	Facts and Trends in Secondary Education	John Dahl, Ph.D., Dean, School of Education, California State College
2:45--3:00 p.m.	Discussion	
3:00--3:30 p.m.	Business and Announcements	

NORTH ATLANTIC A REGIONAL WORKSHOP

Statler-Hilton Hotel
Hartford, Connecticut
November 14-15, 1966

Monday, November 14

9:00 a.m.	Purpose of Workshop	Muriel B. Vesey, Regional Vice-Chairman
	Welcome	Florence C. Austin, President, Connecticut League for Nursing
		Juliana Mack, Chairman, Local Committee
9:45--10:45 a.m.	Potential Nurses: Who, Where, and How	Eleanor W. Lambert, Assistant Director of Admissions, Northeastern University
11:00--12:00 noon	Group Activity	
12:00--1:30 p.m.	Luncheon	
1:30--2:30 p.m.	Learning; Fact and Fancy	Frank E. Marsh, Jr., D. Ed., Dean of the College of Education, Northeastern University
2:45 p.m.	Discussion and Question Period	

Tuesday, November 15

9:00 a.m.	Instructional Technology: New Oil for Old Lamps	James E. Gilbert, Director, Center for Instructional Services, Northeastern University
11:30--1:30 p.m.	Luncheon	
1:30--2:30 p.m.	Group Activity	
2:30--3:30 p.m.	Question Period	

NORTH ATLANTIC B REGIONAL WORKSHOP

Sheraton Hotel
Philadelphia, Pennsylvania
November 17-18, 1966

Thursday, November 17

9:00 a.m.	Purpose of Workshop	Sister Marian Catherine, CMA Chairman
	Welcome	Jessie M. Glass, President, Pennsylvania State League for Nursing Iris Machlan, President, Southeastern League for Nursing Helen Butler, Chairman, Local Committee
9:45--10:45 a.m.	Today's High School Graduate	C. Kirk Greer, Director of Admissions, Temple University
11:00--12:00 noon	Group Activity	
12:00--1:30 p.m.	Luncheon	
1:30--2:30 p.m.	Instruction for Competent Decision-Making: What Psychologists Are Learning About Student Achievement	Norman Chansky, Associate Professor of Educational Psychology, Temple University
2:45 p.m.	Discussion and Question Period	

Friday, November 18

9:00 a.m.	The Impact of Technology Upon Teaching	Stanton W. Saltzman, Director, Department of Medical Communications, Temple University
11:30--1:30 p.m.	Luncheon	
1:30--3:00 p.m.	Group Activity--Reports, Discussion, Questions	

VT 006 163
Peterson, Milo J.
Vocational Education at the High School Level.

National Committee for Children and Youth, Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - [64] 15p.

*VOCATIONAL AGRICULTURE; EDUCATIONAL PHILOSOPHY; *EDUCATIONAL PROGRAMS; EDUCATIONAL RESPONSIBILITY; SECONDARY EDUCATION; POST SECONDARY EDUCATION; ADULT FARMER EDUCATION; *RURAL SCHOOLS; *EDUCATIONAL OPPORTUNITIES; YOUTH CLUBS

Vocational education is a major responsibility of comprehensive high schools. True community schools are equally sensitive to both the needs of those who will remain in the community and those who will leave to seek their futures elsewhere. Adult education is an integral function. The fact that 80 percent of our high school students will not graduate from college indicates an overemphasis on college preparatory curriculum. A six state sample studied by the President's Panel in 1962-63 revealed that in rural communities less than one-half of the schools offered agriculture or home economics, and industrial and distributive education were practically non-existent. Vocational agriculture has been demonstratively successful in providing adult education, post high school education, and secondary education. Care must be exercised that the critical need for vastly expanded vocational education in the cities is accomplished without detriment to the need for expanded and improved agriculture and home economics programs in rural America. (DM)

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VOCATIONAL EDUCATION AT THE HIGH SCHOOL LEVEL

by

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and
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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT006163

VOCATIONAL EDUCATION AT THE HIGH SCHOOL LEVEL

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ABSTRACT

Vocational education is a prime responsibility of the comprehensive high schools of America. Education for the world of work flourishes best where such schools are dedicated to providing educational opportunity for all the people. A true community school is equally sensitive to the needs of those who will remain in the community and those who will leave to seek their futures elsewhere. Adult education becomes an integral, not a peripheral, function.

The most glaring maladjustment of our high schools at present is the emphasis on college preparation at the expense of vocational and prevocational education. Eighty percent of the students presently in our public schools will not graduate from college. This describes one dimension of the task ahead.

The report of the President's Panel of Consultants on Vocational Education recommends that present vocational programs must be extended and improved, new programs must be initiated and a wider range of age and ability groups must be served. A six-state sample studied by the President's Panel in 1962-63 revealed that in rural communities less than half of the schools offered agriculture or home economics and industrial and distributive education were practically non-existent.

Vocational agriculture and home economics have been the most demonstrably successful vocational programs, especially in rural areas. A vocational agriculture program provides education for (1) adult farm people established in a farm business, (2) post-high school youth seeking entrance into farming or a farm-related occupation, and (3) high school students interested in farming or other agricultural careers. For the high school program, of which the Future Farmers of America is a significant part, the objectives are (1) to develop an understanding and appreciation of modern agriculture and rural life, (2) to develop leadership and citizenship, (3) to provide supervised work experience, (4) to make a beginning in an agricultural pursuit, and (5) to prepare for further study.

Boys coming through the vo-ag Future Farmers of America program have been exposed to sound preparation for the world of work. They bring to a job familiarity with work and a willingness to demonstrate it. They are the products of a farm background, problem-solving training, and an understanding of biological and mechanical principles. Of these there has never been a surplus.

In the immediate future care must be exercised that the critical need for vastly expanded vocational education in the cities is accomplished without detriment to the need for expanded and improved agriculture and home economics programs in rural America. Rural youth, the future producers of food, fiber and forest products for the world are the keys to lasting progress, not only for our rural areas, but for our cities as well.

Even the most casual observer of the present situation in the United States will conclude that we Americans are in the midst of another crisis. With only a modicum of insight our casual observer might well conclude that this crisis has three characteristics; (1) it is of our own making; (2) solutions are deceptively obvious and politically difficult of attainment; and (3) public education has a major role in any effort to ameliorate the difficulties that confront us.

THE COMMUNITY SCHOOL PHILOSOPHY

A review of history will suggest that the United States has a unique characteristic, one that has enabled us to survive and prosper in a hostile world. This characteristic is our system of universal public education. Our passion for unrestricted educational opportunity for all of our people, and indeed, for people everywhere has released creative capacity unmatched in the world's history. We are, so far as I can determine, the only people who have dedicated themselves to an educational system geared to the maximum development of each individual. To be sure, we have made mistakes, worshipped false gods, gone off on tangents, been subjected to violent criticism, and developed acute symptoms of withdrawal, but by and large United States, and particularly rural America, can be proud of its educational heritage.

Out of our efforts to provide educational opportunity for all has come the community school philosophy. This philosophy is the essence of conservative, practical America, which seeks to preserve those values of free opportunity which we all do, or should, cherish. In this philosophy administration is the servant of teaching, the school is a part of, not apart from, the community it is obliged to serve and from which it draws its support. The community school is characterized by an idea rather than by physical facilities, important as they are. In short, the community school is dedicated to the idea that all of the people in its service area have a claim on its educational resources to the end that they achieve their potential. The community school is equally sensitive to the educational needs of those who will remain in the community and those who leave, Adult education is accepted as an integral responsibility rather than a peripheral activity that might be shifted to other agencies.

ROLE OF VOCATIONAL EDUCATION

Where does vocational education for rural America find its proper niche in this kind of school system? The answer is readily available to anyone who cares to seek it. Eighty per cent of the students now in elementary and secondary schools will not complete college. Conversely, it is an observable phenomenon that the lion's share of our educational resources are devoted to alleged college preparatory work. This is perhaps our most glaring maladjustment. Fortunately it is amenable to correction. It is also fortunate that vocational education has been able to do a massive job to date with a minimum of resources.

Vocational education has a major role to play as our high schools bend their efforts toward preparation for the world of work. Present vocational programs must be extended and improved, new programs must be introduced, and a wider range of ability and age groups must be taught. In the words of the President's Panel of Consultants on Vocational Education[1] this means vocational education for (1) youth in high school who are preparing to enter the labor market or to become homemakers; (2) youth with academic, socio-economic or other handicaps that prevent them from succeeding in the regular vocational education program; (3) youth and adults who have completed or left high school and are full-time students, preparing to enter the labor market; (4) youth and adults unemployed or at work who need training or retraining to achieve employment stability; as well as (5) services and facilities to assure quality in all vocational and technical education programs.

Translated into action, the Panel's recommendations have great significance for rural youth and their parents. Agriculture and home economics programs will be broadened and expanded, office training, distributive education and industrial education will be made more available.

The necessity for vocational education's increased role was dramatically revealed in a study reported by the President's Panel of Consultants[2] that showed industrial education to be available in only two per cent of the schools in communities under 2500 population and less than half of the schools offered agriculture or home economics. Distributive courses were practically nonexistent.

NATURE AND PURPOSE OF VOCATIONAL EDUCATION IN RURAL SCHOOLS

The vast rural areas of the United States have not been adequately served by vocational education. To suggest that rural youth have been given proportionately greater vocational educational opportunities than their urban cousins in no way improves the situation. Nevertheless, vocational agriculture and home economics, although available in less than one-half of the high schools in small communities, have been the most demonstrably successful vocational education programs in the entire country. A brief description of one such program may be helpful in evaluating future needs.

VOCATIONAL AGRICULTURE

The vocational agriculture program has developed over the past half century to its present state. More than 800,000 individuals are enrolled in programs of systematic instruction. Its overall purpose is to provide educational opportunity in agriculture through the public schools. This is achieved through a series of mutually exclusive, but closely allied phases.

ADULT EDUCATION IN AGRICULTURE

About one third of the enrollment in vocational agriculture nationally is composed of adult farmers and their wives. In Minnesota, my home state, adult enrollment is about one-half of the total. The objective of adult education in agriculture is to increase the efficiency of the farm business operation and raise the level of living.

Adult education in agriculture is geared to aid farm operators in solving the management problems involved in modern farming. The basic problem of farming is adjustment to changing conditions, most of them economic. It is natural, then, that farm management and business analysis provide the vehicle for most effective teaching. The decisions farm operators must make are rooted in the economics of management. The instructional program, therefore, must have a similar origin if it is to be truly and effectively helpful.

A three year course of study for farm operators (and their wives) has been developed and is proving successful. The first year is principally devoted to teaching the techniques of keeping an accurate and complete set of accounts, analyzing the present situation, establishing preliminary family goals, and using the farm records and accounts in decision making. During the second year major emphasis is given to farm business analysis, revision of goals, and identifying the strong and weak points of the present farm business organization. The third year is pointed toward improving the farm business organization. With two years of actual farm record analysis at hand a farm operator begins to gain an understanding of his business that can be gained in no other way. This program calls for about 15 class sessions per year supplemented by individual on-farm instruction throughout.

In addition to the farm management and business analysis instruction, units are offered each year in mechanized agriculture and farm mechanics and in the important crop and livestock enterprises. These may vary from a short intensive tractor clinic to a series of lessons on grain marketing or quality milk production.

Thus the adult education program attempts to aid the farm operator in developing an understanding of prices and price relationships and more effective control over such factors as size of business, combination of enterprises, labor efficiency, rates of production, and cost control. These are the major factors influencing profits from a farming business.

The need for this type of education in agriculture is dramatically demonstrated by the fact that in any group of farms in the same community, operating under similar conditions of weather, type of farming, government programs, general soil type, and price relationships there will be in any year a wide, sometimes almost unbelievable, range in earnings. This is due largely to variations in management. Good management depends on an intimate knowledge of the business which is available only through farm records and accounts. The number of farm operators who make must decisions based on inadequate knowledge of their businesses is all too large. It is estimated that less than 10 per cent of the farm operators know their returns per hour of labor; returns per $100 of feed fed to livestock; costs of producing a unit of livestock or grain; relative net profits of the various enterprises; and cost per acre or per production unit of feed grains, cash crops, and forage; or cost per hour or per acre of machinery, fertilizer, and capital. Without such information an operator of a farm business is working under severe hendicaps indeed. A sound adult education program will provide the opportunity for better farm business management, higher farm income, and an enriched level of living.

EDUCATION FOR POST-HIGH SCHOOL YOUTH

In every community there are young men and women who, having terminated or completed their high school education, are seeking economic self-sufficiency. Some of these people will leave the community to further their education or seek employment. Others will choose to remain in the community. It is this latter group that the post-high school program is designed to serve. From this group will come the local leaders, taxpayers, lawmakers and heads of families in the community. A vocational agriculture program that fails to recognize the specific educational needs of these young people is, in my opinion, derelict in its duties.

In agricultural education such a program is pointed towards the rural post-high school youth. For lack of a more appropriate designation it has come to be known as Young Farmer Education. Its purpose is to aid in occupational establishment and personal adjustment to adult responsibilities and opportunities in the field of agriculture. The specific objectives, as presently spelled out by the Minnesota Young Farmer Development Committee, may be stated as follows:

1. To provide an inventory of opportunities in farming and other agricultural occupations in the community.

2. To develop a roster of post-high school youth interested in establishment in farming or other agricultural business.

3. To coordinate community resources in education credit and financial management to the end that adequate capital is made available to young farmers on a mutually beneficial basis.

4. To provide an educational program on an organized, systematic basis that will:

    (a) develop leadership and citizenship

    (b) provide qualified students with information relative to requirements for entrance into farming or other agricultural occupations

    (c) permit students to assess their resources and qualifications against the entrance requirements of agricultural occupations

    (d) develop the skills, attitudes, and knowledge necessary for successful occupational establishment

    (e) develop individual goals and programs of work

These objectives are achieved through instruction organized around three main headings. They are:

1. The economic-vocational area of instruction.

2. The socio-civic area of instruction.

3. Individual counselling and on-farm instruction.

Examples of lesson topics in the economic-vocational area include land judging, farm appraisal, records and accounts, crop and livestock management, occupational opportunities and requirements in agriculture, management, marketing, taxes, credit, the mechanization of agriculture, leases and partnerships.

The socio-civic area of instruction will deal with such topics as organizing a Young Farmers Association, legal aspects of farming, local and state government, administration of the public school system, community services, responsibilities of rural leadership and citizenship.

Individual counselling and on-farm instruction is designed to accomplish those objectives that must be attacked or approached on a personal basis for most effective results. Here is where individual aspirations are explored, goals established and specific work programs are developed and checked in detail.

The Young Farmer Program serves rural youth at a crucial time in their lives. This is a most strategic group so far as the local community is concerned for it is during this period when the most significant decisions of a lifetime are made.

HIGH SCHOOL FFA EDUCATION

Instruction for high school students is perhaps the most widely known phase of vocational agriculture in the United States for the obvious reasons of ease of administration and adaptability to traditional school philosophy. The Future Farmers of America, the largest organization of farm boys in the world, has proved to be the most effective vehicle for teaching.

Specifically the high school FFA program has five major desired outcomes or objectives. They are:

1. To develop an appreciation and understanding of modern agriculture and rural life.

2. To develop citizenship and leadership.

3. To provide supervised work experience in agriculture at the operational and managerial levels.

4. To make a beginning in an agricultural pursuit commensurate with individual capacity, interest, and opportunity.

5. To prepare for further study in agriculture at the vocational-technical or collegiate level.

Since the inception of this program in the early 1900's it has enjoyed steady growth and development. The most rapid expansion has taken place since the close of World War II hostilities.

In general, the instructional program emphasizes the exploratory and introductory phases during the first year with increasing specialization and depth as the student progresses through the program. Management, conservation, safety, mechanized agriculture and farm mechanics, enterprise analysis, public speaking, parliamentary procedure, and the application of the principles of biological science to crop and livestock production are stressed throughout. Each student develops and carries out a program of supervised work experience in agriculture. The planning is done cooperatively by the student, the teacher, and the parents. Students are engaged in these "work experience" or "supervised farming" programs all year round and year after year until they finish high school and become eligible for the Young Farmer Program or leave the community for further enterprise elsewhere. Some of the desirable features of supervised work experience programs in agriculture can be described as follows:

1. Theory and practice occur together.

2. They are large enough to make the labor, management, and capital invested worthwhile.

3. They are adapted to the individuals' home situation, agricultural experience, and to the community.

4. They provide experience in both operation and management as well as partnership and ownership opportunities.

5. They have continuity from year to year.

6. They expand as the program develops.

The total program of classroom instruction, shop, laboratory and library experience; Future Farmers of America leadership development; and on-farm instruction and counselling is coordinated by the instructors in annual plans of work and instruction. The basic method of teaching follows the procedures of science. There are four steps in the basic teaching method which can be described briefly as follows:

Step 1. Analyzing the present situation in terms of the student's opportunities, aspirations, interests, aptitudes, and home situation.

Step 2. Establishing goals based on realistic analysis.

Step 3. Executing a plan of procedure to reach the immediate and long range goals.

Step 4. Periodic evaluation to measure progress and provide a basis for revision of goals and plans of procedure.

From the students point of view this may be summarized by four questions: (1) Where am I? (2) Where am I going? (3) How do I get there? and (4) How am I doing?

PREPARING RURAL YOUTH FOR EMPLOYMENT

From the viewpoint of a school administrator this program has merit as it increases the holding power of the school. For those concerned with agricultural education at the college level it is significant that half of the students in the College of Agriculture in Minnesota came to the College through vocational agriculture.

With employers in nonfarm agricultural occupations the vocational agriculture program apparently enjoys high repute. There are numerous instances where young men with a background of Future Farmers of America experience and training are subject to diligent recruitment. The reasons for this are obvious. These boys have been exposed to sound preparation for the world of work. They bring to a job a familiarity with work and a willingness to demonstrate it. They are able to accept responsibility. They are the products of a happy combination of circumstances that provide a farm background, problem-solving training, and an understanding of biological and mechanical principles. They are, in fact, the cream of the farm crop and represent an area in which there has never been a surplus.

The original purpose of vocational agriculture was to train qualified and interested people for proficiency in farming. This has always included present, prospective, and future farmers. Over the years the perspective has broadened as agriculture itself has broadened and grown. What happens to boys who complete the vocational agriculture curriculum in our public high schools?

The answer to this question will not be the same in Maine as in Minnesota; nor will it be identical in the suburban areas of a state as in the rural areas. However, the evidence will permit some general observations and those voiced here will apply to the mid-western area of the United States.

Only about a third of the people starting farming in the past 10 years have had any vocational agriculture. About a third to a half of the vocational agriculture graduates enter farming while another 15 to 25 per cent enter related agricultural occupations.[3] We are not training enough farmer replacements nor are we providing sufficient people to enter the nonfarm agricultural careers. So it is a fair observation that the public schools have not done enough in this aspect of public educational responsibility. It is also apparent that the products of vocational agriculture have their choice of careers. The lads who complete vocational agriculture in high school have plenty to sell and the demand is high. Generally they do not contribute to urban unemployment upon migration to cities nor are they among those who illustrate the plight of the functional or vocational rural illiterate who is displaced by a tractor and migrates to the city looking for work. The farm boy who migrates to the city and cannot compete for a good job is not the FFA boy with three or four years of hard-nosed vocational agriculture. He is more apt to be a high school dropout or the victim of a rural community school that failed to include vocational agriculture in its course offerings. The record of vocational agriculture in preparing people to be employable is a commendable one; the need now is for more and better programs of this kind.

RELATIONSHIP OF VOCATIONAL AGRICULTURE TO OTHER VOCATIONAL EDUCATION

Much has been said about vocational education in recent months. In fact, vocational education seems to have replaced life adjustment and reading as the whipping boy of public education. It has become common practice to lump all federally reimbursed vocational programs into one category and to speak and write glibly about the subject. In cold fact, the various programs of vocational education are different in as many ways as they are alike. To be sure there is a common dedication to training for useful work in the homes, factories, offices, industries, businesses, and on the farms of America. The principles basic to this philosophy are shared by all. Yet the programs are quite different in operation.

Trade and industrial occupation, for example, prepares people to perform specific skills in specific occupations such as drill press operators or type setters. To date trade and industrial education is largely a post-high school program. Distributive occupations zero in on sales and service jobs within specific job classifications. Home economics education treats the basic occupation of homemaking as a vocation in itself and rightly so. The only training in budgeting, household accounting, child care and home management most modern brides get is their high school home economics course. Industrial arts has professed a general education classification and denies vocational purpose, yet it has inherent vocational outcomes that cannot be denied.

Vocational agriculture, in common with all sound vocational education, has insisted always that theory and practice occur together in training people of all ages with a concern in agriculture. It shares with trade and industrial education a major responsibility for adult education. It likewise has an integral role in the high school curricula. Every high school student of vocational agriculture carries out a program of supervised work experience, usually called a supervised farming program and normally conducted on the home farm in cooperation with his parents and teacher. Thus, close working relationships between the home and the school, among the boy, his parents and teacher are the _sine quo non_ of vocational agriculture and constitute its most distinguishing characteristic. Such a learning-teaching situation enhances the opportunity and responsibility for effective and realistic guidance which has been a hallmark of vocational agriculture through the years. The motto of the Future Farmers of America "learning to do, doing to learn, earning to live, living to serve" is not a collection of idle phrases; it is a living reality.

Likewise the creed of the FFA has permeated the learning-teaching process. It is perhaps the most eloquent statement of the vocational agriculture philosophy and explains much of the value of this program over and beyond the strictly vocational virtues.

It says: "I believe in the future of farming, with a faith born not of words but of deeds -- achievements won by the present and past generations of farmers; in the promise of better days through better ways, even as the better things we now enjoy have come up to us from the struggles of former years.

"I believe that to live and work on a good farm is pleasant as well as challenging; for I know the joys and discomforts of farm life and hold an inborn fondness for those associations which, even in hours of discouragement, I cannot deny.

"I believe in leadership from ourselves and respect from others. I believe in my own ability to work efficiently and think clearly, with such knowledge and skill as I can secure, and in the ability of organized farmers to serve our own and the public interest in marketing the product of our toil. I believe we can safeguard those rights against practices and policies that are unfair.

"I believe in less dependence on begging and more power in bargaining; in the life abundant and enough honest wealth to help make it so -- for others as well as myself; in less need for charity and more of it when needed; in being happy myself and playing square with those whose happiness depends upon me.

"I believe that rural America can and will hold true to the best traditions in our national life and that I can exert an influence in my home and community which will stand solid for my part in that inspiring task."

Much has been said in recent months about the population shifts and the decimation of the farm population. Certain writers and speakers seem to have suddenly discovered a trend from farm to city that has been going on since the industrial revolution. At the same time there have been suggestions that the farm youth is poorly trained to compete with his city-born counterpart for jobs. All this may be true, but like the book "Tobacco Road" it lacks a lot of being the whole truth.

It has been suggested in certain quarters that because of the trend toward larger, higher capitalized farm businesses and the subsequent reduction in the number of persons required to operate them that there should be a corresponding reduction in vocational agriculture programs. This is not only ridiculous, but dangerous. The trend toward fewer and larger business units in agriculture is in harmony with the general trend in other businesses, industries, and indeed, in school districts. It is a function of technology and is not to be deplored except insofar as educational opportunity has failed to keep pace. Shall we conclude that because we now have fewer school administrative units we should give less emphasis to training school superintendents? We have fewer airlines, fewer retail grocery companies, fewer bank corporations now than we had a few years ago, but this trend toward mergers and consolidation of units seems a poor reason for withdrawing educational resources. Statements have been made, however, recommending that this be done in vocational agriculture in order to increase support of other valuable vocational programs. Such reasoning seems to imply that robbing Peter to pay Paul will raise the average.

It is statistically possible to project the trend in declining farm population and name the year in which there will be no more farms. The same kind of projection can be made statistically to show that the advancing average age of farm operators will one day result in century-old farmers. I fear that too many of the recent rash of statements about vocational agriculture have relied on this type of analysis.

For rural boys, and particularly farm boys, it is difficult to visualize a program that will do more to prepare them for useful employment than modern, forward-looking vocational agriculture. This program matches environment and education; teaches commitment to work; provides opportunity to earn, save and invest; and encourages self-reliance.

NEEDED PROGRAMS

Testimony presented to both the House of Representatives and the Senate of the United States indicates that responsible leaders of vocational education are unanimous in their judgment. They have recommended that present programs be broadened and expanded, that new programs in such areas as office occupations be included in the cooperatively supported federal-state-local programs, and that area vocational schools play a larger role in vocational education.

In this emerging pattern two specific developments seem certain. First, home economics instruction will greatly extend its training program for gainful occupations involving home economics skills and knowledge. Shopping services for residents of rest homes, buyers aides, home care, substitute mothers for working wives with small children, and the whole range of food services illustrate the types of training to be given added special attention.

Second, vocational agriculture will move to give special attention to the so-called agribusiness occupations and at the same time greatly step up adult education using the farm business analysis approach. A third development in vocational agriculture will see the process by which qualified young men become established in farming and related agricultural occupations receiving intensive study. Apprentice-type programs in agribusiness occupations will operate side by side with the present supervised farming programs. The high school classes and the Future Farmers of America will continue to play a major role in introducing young men to the wide and wonderful world of modern agriculture.

Home economics and agriculture will likely continue to be the dominant vocational programs for rural America. This is as it should be. Homemaking and home economics occupations are basic to strong family units. Farming is now, and will continue to be the largest single entrepreneurial opportunity in most of the United States and certainly in rural America. In the welter of change it must be remembered that agribusiness depends on a system of well managed profitable family farms. Without well trained farm operators the entire structure of agribusiness will come down like a house of cards.

In the immediate future the need for more and better vocational education will be greater in cities than in rural areas. The cities are in crisis. Care must be exercised that this need is met without prejudice to the continuing need for expanded vocational education in the broad reaches of rural America. Rural youth, the future producers of food, fiber and forest products for the world, are the keys to lasting progress, not only for rural areas, but for our cities as well.

No vocational education program can succeed without carefully selected and well prepared teachers. This is a function and responsibility of colleges and universities, especially land grant institutions and state universities. They are the fountainhead of the professional growth and development of teachers, supervisors, and administrators. In them resides also the primary responsibility for research and for its interpretation and dissemination. Vocational education departments in higher education institutions must be more than a contractual relationship with State Boards for Vocational Education. Theirs is the responsibility, in large measure, for developing vocational education for rural America as a discipline worthy of the respect of all by virtue of its merit and the dignity of useful work.

FOOTNOTES

1/ Education for a Changing World of Work, Office of Education, Publication, Washington, D.C.: U.S. Government Printing Office, No. 80020, 1962, p. 17.

2/ Ibid., p. 11.

3/ Hillstrom, Raymond. "A Follow-Up Study of Graduates of Willmar (Minn.) High School 1951 through 1960 Who Took Vocational Agriculture During Their Senior Year." Colloquium Paper, Dept. of Agricultural Education, University of Minnesota 1963, p. 12-20.

VT 006 227
Runge, William B.
Philosophy and Objectives for Vocational and Technical Education in New Mexico Now and in the Future. Work Project No. 11.

New Mexico Occupational Research and Development Coordinating Unit, Santa Fe
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jun68 31p.

*VOCATIONAL EDUCATION; *TECHNICAL EDUCATION; *EDUCATIONAL PHILOSOPHY; *EDUCATIONAL OBJECTIVES; EDUCATIONAL IMPROVEMENT
NEW MEXICO

Some basic statements of philosophy and objectives underlying vocational and technical education in New Mexico are: (1) Vocational and technical education is an integral part of the total public educational program, (2) Citizens should have the opportunity to be enrolled and trained in programs that are high quality and based upon their abilities, interests, and needs, (3) Curriculum offerings should be developed around employment needs, (4) Strong leadership and support is imperative to the further development of vocational and technical education, (5) Locational educational units must be responsible for adequate instructional facilities and materials, (6) Vocational counseling and guidance services should be made available to all, (7) Exploratory experiences may be provided for students in junior high school, (8) Cooperative work experiences are an integral part of the training program, (9) Curriculum offerings should be made available to meet the needs of employed adults, (10) The educational program should be continuously evaluated, (11) A total state teacher education effort involving institutions of higher learning should be implemented for inservice upgrading of teachers and administrators, and (12) Emphasis should be placed on continuing experimentation and research. General objectives are listed for vocational education and specific objectives for each vocational field. (DM)

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DESIGNING EDUCATION for the FUTURE

and RESEARCH COORDINATING UNIT

New Mexico

"PHILOSOPHY AND OBJECTIVES . . . . . FUTURE"

Dr. William B. Runge
University of New Mexico

WORK PROJECT NO. 11
Educational Program

VTC06227

PHILOSOPHY AND OBJECTIVES
FOR VOCATIONAL AND TECHNICAL EDUCATION
IN NEW MEXICO
NOW AND THE FUTURE

By

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Professor of Education

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Albuquerque

June 1968

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

Prepared for the New Mexico Research Coordinating Unit
and the New Mexico State Advisory Committee
on
Designing Education for the Future
Study Committees on Instructional Program and Educational Facilities

FORWARD

The purpose of this working paper is to stimulate thought and to provoke ideas concerning the subject under study. In no means does this indicate that all available research on this subject has been covered, nor is this paper to be considered an end in itself. The authors of this series of papers have been given considerable freedom to write in the fields of their expertise and/or their firsthand experience. The views, therefore, contained herein represent the opinions and interpretations of the specific author and are to be used in this light by the committee for Designing Education for the Future, and are not to be considered as opinions taken by anyone working on the project other than the author.

It is the sincere hope of the director that the various study and advisory committee members use these papers as a springboard to formulate the necessary program required by this project; therefore, feel free to add to, delete, or change in any manner your working copy of this paper; for, in the true sense, only than can it become a working paper and thereby fulfill the task for which it was prepared.

Thomas B. Bailey Jr.
New Mexico Project Director

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Acknowledgments

This document is the final product of the author working closely with and receiving editorial assistance from all members of the New Mexico State Department of Vocational Education staff, other educators, and persons interested in the further expansion and improvement of Vocational and Technical Education in New Mexico in the years ahead. The following persons have made special contributions to this paper:

Dr. M. G. Hunt, State Director of Vocational Education

State Supervisors of Vocational Education:

- Ralph Gleckler, Distributive Education
- Marian Thomas, Health Occupations
- James Houstman, Office Education
- Catherine Myers and Bonnie Dickinsen, Home Economics Education
- Lee Palmer, Jack Boulton, and Henry Brito, Trade and Technical Education
- L. C. Dalton, Agriculture Education

Dr. Thomas Bailey, Director, Designing Education for the Future

PREFACE

Simply stated vocational education has as its controlling purpose the preparation and improvement of workers for gainful and useful employment. Any statements of philosophy or objectives should ultimately contribute to the development of skills, attitudes, values, understandings and appreciations of persons planning to enter or already in the world of work including homemakers.

Vocational or any other specialized area of education should support the philosophy and objectives of general education. This general education should help each individual to develop to his optimum capacity and to contribute to the improvement of the state and society in which he lives. Vocational and technical education more specifically should make its major contribution to helping individuals become responsible productive workers with positive attitudes about the dignity of work in a free enterprise system. Vocational education must contribute to all educational objectives and develop an appreciation for the ideals of democracy and a respect for authority.

PART I

INTRODUCTION

Developing statements of philosophy and objectives. Educators need a carefully formulated philosophy of education to guide program development at the state and local levels. The philosophy recognizing the needs of students and the community to be served will determine the objectives and nature of course offerings, activities, and learning experiences. The philosophy is a framework of beliefs about education which express the staff's convictions on such points as the nature of the educational process, functions to be performed, duties and responsibilities, the curriculum content and methods of instruction, appropriate student learning activities, objectives and outcomes being sought for the participants, and processes needed for evaluation and constant improvement. Such a statement of philosophy gives direction and impetus to the programs, the courses implemented, the objectives selected, and the learning experiences and activities chosen.

The specific objectives of a state are the philosophical beliefs reduced to specific "behavioral" changes desired in the student. For use in this document objectives are stated in terms of terminal behavior desired and planned for the participant. Such terminal student behavior should be observable and measureable and assist in determining the values of such educational experiences for the student.

The objectives included in this document are stated in concrete and specific language for the occupational areas of vocational and technical programs. The statements of objectives per se should be adapted to the needs and abilities of students enrolled in vocational and technical courses. Teachers should strive for excellence in their implementation and evaluation.

General education philosophy and objectives. Public education in New Mexico should assist all citizens to become as well adjusted as is possible to the society in which they live. Local schools should be guided by many objectives with the emphasis being based on specific community needs, resources, and priorities determined cooperatively by the local administrators, teachers, parents, and others concerned. The following listing of broad objectives stems from a number of such statements by national, state, and local groups to meet the needs of all citizens. All schools should be concerned with helping the youth and adults enrolled in educational institutions to:

1. Understand and appreciate American democracy, including the rights and responsibilities of each citizen, and to be diligent and competent in performing the obligations necessary for the successful implementation of this free enterprise democratic society.
2. Develop basic abilities in reading, writing, spelling, listening, communicating, expression, and the mental processes.
3. Recognize and develop the attitudes, competencies, and understandings basic to a satisfying family life.
4. Develop the capacities, interests, and understandings needed to appreciate nature and the arts in our own and other cultures.
5. Understand the mental processes, and applications of natural and social sciences, the influences of science on human life, and the nature of the universe and of man.
6. Develop and maintain good physical and mental health.
7. Develop interests and abilities in and leading to activities which will contribute to the effective use of leisure time.

8. Develop and grow in the understandings and insights needed to maintain a high standard of moral and spiritual values.
9. Develop abilities necessary for efficient consumption of human and natural resources of goods and services.
10. Develop the abilities, skills, attitudes and understandings that make an individual a successful and happy gainfully employed worker and participant in an ever changing world of work.

Definitions of vocational and technical education. The term "vocational education" refers to all formal instruction for both youth and adults, at the secondary school, post-high school, and out-of-school levels, which prepares individuals for initial entrance into and advancement within an occupation or group of related occupations.

"Technical education" is considered a natural continuum of vocational education which usually requires more advanced science and mathematics as a background. Included are occupations such as electronic circuitry, optical physics, mechanical design, process control, dietician aides, child care assistants, interior design assistants, and nursing and data processing. Such programs are of college grade. A two-year certificate may be granted.

Vocational and technical education programs may be conducted by agencies other than the public schools including private business and industry, hospitals, governmental agencies, private institutions, labor unions, armed services, and private schools. New Mexico should encourage, support, and cooperate with such agencies and institutions in their efforts to provide occupational education whenever possible.

PART II

BASIC STATEMENTS OF PHILOSOPHY AND OBJECTIVES UNDERLYING VOCATIONAL AND TECHNICAL EDUCATION IN NEW MEXICO

Philosophy statements. Vocational and technical education has been accepted as a very important and necessary part of the total program of education in any state or local community. The following statements of philosophy or basic beliefs should serve as guidelines for persons concerned with the further development of such programs in New Mexico.

1. New Mexico vocational and technical education is an integral part of the total public educational program carefully coordinated with general education and any specific courses which may contribute to occupational competency. Programs may be offered in any public or private educational institutions such as comprehensive secondary schools, specialized vocational and technical schools, junior and community colleges, four year colleges and universities, and agencies which may have adequate facilities or special programs which will contribute to the total effort of preparing competent workers.
2. New Mexico citizens should have an opportunity to be enrolled and trained in vocational and technical programs that are of high quality and based upon their abilities, interests, and needs. Programs should be available to a wide range of student abilities and capacities from the least able and disadvantaged to those with a high level of technical potential ability.
3. Vocational programs and curriculum offerings should be planned, developed, and based on employment needs of local and state industries and businesses. These needs may be ascertained by surveys and the Employment Security Commission. Employment status, changes, and predictions should be

carefully studied and the curriculum and instruction based on clearly defined skills, attitudes, abilities and understandings needed for successful entry into a particular occupation or for worker advancement after initial entry. Programs and curriculum offerings should be cooperatively planned by educators, business and industrial groups, employers, labor groups, employment service personnel and others concerned with the specific training being planned and offered. Cooperation and coordination between educators and future employers is essential so that school programs will be coordinated with on-the-job training and needs. Vocational programs must encourage flexibility and adaptability in their graduates as they may change jobs any number of times during adult life.

4. Strong leadership and support is imperative to the further development of vocational and technical education by educators, state and local legislators, employers, labor groups, laymen and others. Proper legislation and financial support is a necessity in order to properly implement such programs. The State Board of Education through the Department of Vocational Education should provide the Governor, State legislators, and Department of Finance with a plan of action for the development and implementation of vocational education in New Mexico. The plan should include information and recommendations relative to the maintenance, expansion and improvement of vocational and technical education, such as financing, staffing, and providing adequate facilities.

5. Local educational units must be responsible for adequate instructional facilities and materials including laboratories, classrooms and shops. The physical plants should be designed to meet the specific needs of the occupations being served, attractive to merit the respect of the community and bring about a high level image of the education being provided. It is imperative that classroom instructional materials and aids be kept up

to date and comparable to those used by industry. Youth and Adult club groups are an integral part of the program and provide activities to strengthen program objectives.

6. Vocational counseling and guidance services should be made available to all youth and adults and assist individuals to select, prepare for, enter upon, and advance in an occupation. Selection of students must be discriminative through counseling, and only students with potentialities to succeed be enrolled in training. This indicates a need for selection and admission criteria and counseling prior to and during enrollment, and in the follow-up on the job. Vocational education leaders may assist vocational guidance counselors by giving information about occupations in New Mexico and America.

7. Pre-employment, exploratory and try-out experiences may be provided for students in junior high schools. These learning experiences should lead into broad basic education for occupational areas and finally into more specialized and advanced programs for higher level and more demanding positions. Students should be assisted by vocational guidance counselors in planning total vocational career programs which would allow them to advance as far as their abilities and potential capabilities will support them. In-school work study programs should be made available and widely used for exploratory experiences.

8. Valid, cooperative part-time work experiences are an integral part of the training program strengthening school classes offered after initial exploration and some pre-employment preparation. Cooperative part-time work programs will be for students reaching employable age. Programs should be carefully coordinated and adequately supervised by a well qualified coordinator-teacher. The instruction is based upon the requirements of the occupation as determined by job analysis and occupational opportunities.

9. Curriculum offerings should be made available to meet the needs of employed adults who desire updating, upgrading, and training for new occupations.
10. The vocational and technical education program should be continuously evaluated using established criteria for each subject and occupational area. Valid follow-up studies should be made periodically of former students. Summarization of information and other facts gleaned from such studies may be used advantageously in curriculum planning and making those changes necessary to meet demands in industry and business.
11. A total state teacher education effort should be planned and implemented involving institutions of higher learning who have resources available that will assist in the preparation of and in-service upgrading of vocational and technical teachers and potential administrators. These students should be provided with needed technical information and skills, broadened general education and professional experience and understanding for planning and teaching vocational and technical education classes.
12. Emphasis should be placed on continuing experimentation and research involving vocational and technical education and any other discipline that might be related. Individual pilot programs should be encouraged in new areas of development. Old established practices should be evaluated and proven worthy of continuation in a total program. Information on findings in research and development must be disseminated and applied to further expansion and improvement of programs.

General vocational objectives. Terminal behavior stated as fundamental competencies apply to all vocational or technical courses or programs. While these more specific objectives may differ for each field, certain ones could be identified as important for a vocational education program in any special occupational area. The following are suggested general outcomes for vocational and technical education programs in New Mexico as expressed in terms of characteristics for a person occupationally competent in today's society.

1. He understands the requirements of the occupation and has the ability to meet these requirements.
2. He has mastered the basic abilities or skills, and the technical information achieving to the standards of the job market or requirements for success in the occupation.
3. He understands procedures to follow in applying for a job.
4. He understands and realizes additional training and experience is what may be necessary for advancement in his chosen work.
5. He understands the relationships between management and employees in his occupation as well as the functions of their respective groups.
6. He understands the relationships of the laws, taxes, social security and other governmental matters to his occupation.
7. He understands how his occupation functions in relation to others in our total free enterprise society.
8. He understands how his occupation functions in relation to the local, state, and national economy.
9. He is aware of, and is motivated to make use of educational opportunities to qualify for advancement in the occupation; and to acquire new understandings, abilities, and skills resulting from increased application of technology to the occupation of his choice.

10. He has developed some ability to make sensible decisions on problems and questions facing workers in a rapidly changing occupational setting.

PART III

SPECIAL OCCUPATIONAL AREA OBJECTIVES

Occupational groupings. Historically Vocational Education became a reality with the Federal Legislation of the Smith-Hughes Acts making funds available for promoting vocational education throughout America. Since 1917 the following programs were developed: (1) farming and agriculture (2) marketing and distribution (3) home economics (4) trades and industries and (5) nursing and health occupations. Some programs also developed for office occupations and funds were available to stimulate vocational guidance activities related to all areas of special occupational education. In many ways this organizational structure dictated how state and local programs were established and developed.

New directions for vocational education. The Vocational Education Act of 1963 greatly broadened the scope and possibilities for expanded and improved offerings throughout America. It provided unearmarked funds for developing a broad vocational program rather than for specific occupational categories as listed above. The Act of 1963 provides funds for vocational education programs for (1) persons attending high school, (2) persons who have completed or left high school but are free to study full time in preparation for a job, (3) persons who have already entered the labor market but need training or retraining, and (4) persons who have handicaps--academic, socio-economic, or other--that prevent them from succeeding in the regular vocational education program. It also provides funds to be used in constructing area vocational schools which should broaden curriculum offerings beyond those under the older "traditional" organizational patterns. Special funds are designated to be used for ancillary services and activities--training and supervision of vocational and technical teachers, supervision and evaluation of programs, experimental and demonstration programs, development of instructional materials, and the improvement of state administration, supervision and leadership.

However, since most states are still organized with leadership in the occupational areas listed above, and statements of philosophy, objectives, aims and goals have been developed and continue to be modified by persons in these special groupings.

Vocational guidance essential in all aspects of vocational education. Throughout an individual's lifetime there is need to establish and re-establish career objectives. Such decisions are very important to one's total happiness and probably some of the most difficult made during one's lifetime. Vocational guidance services assist students to determine their best interests, capacities and potentials, select career goals based on valid occupational information and job opportunities, in selection of and entrance to special vocational and technical education courses and programs, placement into and improvement on the job, and follow-up education and advancement to more responsible positions.

Agricultural education. Agricultural vocational education consists of well developed courses and programs in secondary schools for the preparation of young farmers and ranchers. It also includes many courses and programs of instruction for adult farmers and ranchers.

The more recent curriculum developments expand these programs to include instruction for persons entering or already engaged in business establishments that are farm and ranch related. These new vocational offerings are applying the principles of soil science, plant science, animal science, and mechanization as they relate to agricultural business occupations. Examples are landscaping and nursery businesses, feed stores, farm and ranch supply houses, poultry producers and distributors, and farm machinery wholesalers and retailers.

After completion of a program in vocational agricultural education students should have the abilities necessary to:

1. Establish a farm or ranch or business involving agricultural related skills, knowledges and concepts.
2. Improve farming, ranching or the operation of an agricultural business establishment in the following technical areas: livestock and crop practices, management and operation of farm or ranch, maintenance and repair of farm machinery, equipment and farm buildings, production of agricultural products, marketing of agricultural products, making decisions based upon analysis of accurate and proper records, credit and finance, and conserving soil, water and other natural resources.
3. Demonstrate interest and pride in farming, ranching, or employment in an agricultural business occupation.
4. Show improved community citizenship and leadership as a result of the agricultural education program.
5. Demonstrate an increased ability to think, express thoughts, to plan, to analyze, to solve problems, and to make wise decisions.
6. Apply the principles of soil science, plant science, animal science, and mechanization as they relate to agricultural business occupations.
7. Demonstrate the technical knowledge and competencies needed if engaged in an agricultural business occupation such as how to work, management and operation procedures, financing and credit, employer-employee relations, marketing of products, salesmanship, display, record keeping, and property maintenance.

Education for marketing and distribution and office occupations. First efforts of this type in the public schools were to prepare typists, bookkeepers and stenographers. Later preparation was added for general clerical and marketing and selling positions. Newest needs include vocational and technical education for clerical-data processing occupations and management positions. Under certain conditions classes with a vocational objective may be pre-vocational in nature. The cooperative plan where students attend school part-time and are placed in business establishments part-time has been an outstanding contribution from the vocational distributive education and office education programs during the past 25 years.

Education in marketing and distribution. Distributive education has been defined as "A program of education offering preparation in the selling, marketing, and merchandising of goods and services, for the purpose of improving distribution and upgrading distributive workers including employees, managers, and owners engaged in marketing and distribution occupations." Distributive occupations are those followed by proprietors, managers, supervisory and rank-and-file employees engaged primarily in marketing or merchandising goods or services. Such occupations may be found in various business establishments including, without being limited to, retailing, wholesaling, manufacturing, storing, transporting, financing, and risk bearing. This means that distribution can be a function in many occupations as well as an occupation itself.

The major objectives of occupational education for marketing and distribution follow. Student graduates should be able to:

1. Describe our system of free enterprise and profit making and determine their potential place in this total unique marketing process.
2. Make a valid choice of career goal in the business world based on up to date occupational information and preliminary try-out experiences in marketing and distribution as related to their own interests, abilities and capacities.

3. Apply successfully for a position in the world of work and perform essential job entry skills including proper work attitudes, abilities needed in getting along with people, proper grooming, personality development, and those in communication and mathematics that contribute to job satisfaction.
4. Demonstrate a knowledge of and apply the technical aspects of marketing and distribution, advertising, display, salesmanship, merchandise and service information, recordkeeping, and minimum operational procedures for employment.
5. Advance to higher level positions and demonstrate and use the technical content of business organization and management, personnel relations, accounting and recordkeeping, taxes affecting business, decision making on the management level, merchandising and sales promotions, business ethics and sales and marketing research and development.
6. Assist the American consumer and all customers to make wise selections of goods and services that will meet their individual and personal needs.
7. Assist the employer in operating his business more efficiently and profitably and take part in the civic, social and community responsibilities shared by all business establishments.

Office education. In addition to contributing to the basic competencies of communication and computation necessary in all office occupations the more specific objectives for vocational office education are as follows. Students completing courses or programs should be able to:

1. Describe our business and economic system and the functions and duties performed in a modern office and the contributions that must be made here for the efficient operation of the business or agency being served.
2. Perform job entry skills for office occupations such as filing, typing, bookkeeping, general clerical work, stenography, data processing, and others.

3. Make a realistic choice of occupational goals in the offices of our business world based on reliable occupational information and try-out experiences in or out of school in office related skills, and based on their own interests, abilities and capacities.
4. Apply successfully for an office occupations position and perform with proper work attitudes, ability to get along with others, the personality characteristics essential to job performance in an office, and the advanced skills needed for possible promotion to higher level office positions.
5. Demonstrate a knowledge of and apply the technical level office skills, attitudes, and knowledges needed for the performance of management level duties and responsibilities.
6. Assist in operating the total business or agency more efficiently and profitably and take part in civic, social and community responsibilities shared by such agencies in the community.

Home economics education. The homes and families are basic foundation strengths in any society and most important resources of this country, hence home economics from its inception has been concerned with the human development and the welfare of individuals as stated in its major purpose "to improve the quality of family living and to help youth and adults develop the abilities needed for the occupation of homemaking -- guidance of children, management of resources, the feeding, clothing, and housing of families." Thus an effective home economics program helps youth and adults: to clarify and establish values and select individual and family goals which are meaningful; to function as a family member, homemaker, parent, and wage earner; and it contributes to the self-development, establishment of interpersonal relationships, and management of skills of the individual. These are of importance to the individual in her own home as well as the individual employed in semi-skilled, skilled, technical or professional work.

Home economics education's second major purpose is: to prepare individuals for gainful employment in occupations using home economics knowledge and skills. Girls and women who have had home economics gain certain knowledges and understandings which help individuals to develop personal characteristics, the ability to work with others, and to organize and manage all aspects of living and working required of a homemaker and a wage earner.

Two other purposes important for offering home economics in secondary schools, post secondary schools, and adult programs are (1) to provide pre-professional education for students who will enter colleges and universities to prepare to become professional home economists; and (2) to motivate and recruit capable and qualified students to take post high school occupational education for gainful employment and/or to go to colleges and universities to prepare for leadership in professional fields of home economics.

Because of developments in society the need for home economics is more important today than during any other period in the history of our nation. It is our belief that the major issues which affect families today require the best attention of education programs -- particularly home economics. In addition to the above mentioned groups, home economics has a contribution to make to the academically and physically handicapped, the non-motivated and the economically deprived. Hence, "We believe that the clearest new direction for home economics is to help people identify and develop certain fundamental competences that will be effective in personal and family living regardless of the particular circumstances of the individual or family."

Fundamental to effective living are the competences to:

1. Establish values which give meaning to personal, family, and

community living and select goals appropriate to these values.

2. Create a home and community environment conducive to the healthy growth and development of all members of the family at all stages of the family cycle.
3. Achieve good interpersonal relationships within the home and within the community.
4. Nurture the young and foster their physical, mental, and social growth and development.
5. Make and carry out intelligent decisions regarding the use of personal, family, and community resources.
6. Establish long-range goals for financial security and work toward their achievement.
7. Plan consumption of goods and services -- including food, clothing, and housing -- in ways that will promote values and goals established by the family.
8. Purchase consumer goods and services appropriate to an overall consumption plan and wise use of economic resources.
9. Perform the tasks of maintaining a home in such a way that they will contribute effectively to furthering individual and family goals.
10. Enrich personal and family life through the arts and humanities and through refreshing and creative use of leisure.
11. Take an intelligent part in legislative and other social action programs which directly affect the welfare of individuals and families.
12. Develop mutual understanding and appreciation of differing cultures and ways of life, and co-operate with people of other cultures who are striving to raise levels of living.

13. Develop critical thinking in solving problems and relating ideas essential to cope with change and apply learnings to present and future situations.

14. Perform the dual role of homemaker and worker.

Industrial education. In the modern world of today, industrial education means more than the mere transmission of skill and technical knowledge--it interprets industry and contributes to the economic, the social and the industrial progress as it facilitates man's efforts in experimenting with better and more efficient productive methods in industrial pursuits. Industrial education is the successful transmission of man's increasing knowledge and ability to control and utilize the forces and materials of an industrial culture. This results in the improvement of tools and useful products to advance civilization. Society's greatest resource for industrial development is its skilled technical manpower.

Trade and technical courses should provide instruction for entry into employment and for upgrading those persons in occupations concerned with designing, producing, maintaining, and servicing industrial products. These specialized areas in industrial education place emphasis on pride and respect for workmanship, practical application of scientific and mathematical principles, essential technical information, developing skills in manipulative occupations, safety practices, good work habits, and a wholesome attitude toward keeping abreast of technological developments.

Among the objectives that are being advanced for total education, reference is made to developing abilities, attitudes, skills, and understandings that make a person an intelligent, occupationally competent worker in a changing economic life. Since industrial pursuits make up a large portion of the total occupational complex, the following objectives tend to enhance these outcomes in individuals seeking to build basic competencies in education concerned with industry. Students completing such courses should be equipped to -

1. Determine their own abilities, interests and potentialities for a career in industry after having completed basic learning experiences in woodworking and carpentry, electricity, electronics, plumbing, and other crafts which are elements in our economy.
2. Select an occupational goal which is realistic in terms of labor and manpower trends in this state and based on predicted job opportunities.
3. Demonstrate competencies in the industrial application of mathematical and scientific principles, and in communication.
4. Demonstrate the fundamental occupational competencies including basic and related information needed to enter both non-and apprenticeable industrial pursuits.
5. Advance to higher level technician positions and demonstrate the skills, knowledges and abilities necessary to work in such occupations.
6. Modify and learn new skills necessary for shifting from one industrial position to another due to rapidly changing technology.
7. Contribute to the community as a successful worker in industrial and technical occupations.

Health occupations programs. With the present demand by people of all ages for health services in hospitals, nursing homes, health centers and specialized institutions, the need for health personnel with various levels of competencies becomes quite apparent.

In the belief and recognition of these health needs, the Health Occupations programs in Vocational Education have the responsibility of:

1. Providing training opportunities to persons with potential, interest, and capabilities to become gainfully employed in health service occupations.
2. Providing properly trained personnel to meet the demand in health service facilities, to share in giving direct care to patient under supervision of a professional nurse, doctor, or dentist.

Toward these objectives, the Health Occupations Division works and cooperates with other community agencies and professional organizations in establishing Health Occupations programs and maintaining high standards of health practices related to the specific Health Occupation.

Vocational nursing as an educational subject can be developed on different levels with proportionate foundations, the range of training which may extend from a relatively short period for nurses aids to the required one-year program in practical nursing and two year associate degree in nursing. Training programs for dental assistants and certified medical technicians are also of one-year duration. The core program for different levels of performance is derived from a cluster of functions inherent and related to the specific health occupations.

Educational programs in the Health Occupations are characterized by:

1. Organization in a program, correlating theory and practice. Professional standards for the one-year practical nursing and the associate degree in nursing training must conform to State Board of Nursing requirements for accreditation.
2. Located in different settings, the programs affiliate with a hospital or health agency with local supervision from divisions of vocational education in public schools, community or junior colleges, or area vocational schools.

3. Selection of students of widely ranging ages of 18-50, without discrimination as to sex, color, or creed. Students must possess interest and abilities that are needed to complete the program and become competent enough to become gainfully employed.
4. Development within the scope of the program of the potentials of the student to become productive members of society.
5. Instruction throughout the training program is given by well-qualified professional faculty, who must meet teacher certification requirements.
6. Provide opportunities for developing knowledge, skills, and attitudes which are related to level of training.

Occupational education in New Mexico--challenge to all. New Mexico has shown a slow, steady growth in a large variety of activities and programs related to vocational and technical education since it was founded as a state. A history could be written on any of many special aspects such as apprenticeship programs, vocational education in the public schools, education within business and industry, contributions of vocational education to the various war efforts, special programs for special groups, vocational and technical education at the post-high school level, and developments during the last ten years.

With a rapidly changing social and economic picture, the unique needs of a tri-cultured society--Anglo, Spanish-American, and Indian--there are still many urgent needs and unsolved problems related to occupational preparation, adjustment on the job and advancement. The program should develop a mutual understanding and appreciation of these differing cultures and promote cooperation among all groups. Anyone concerned with contributing to a better place to live and work in New Mexico through occupational education can hardly fail to see and feel the tremendous challenges facing the state and the serious responsibilities that must be assumed. Vocational educators must provide strong leadership and work diligently to implement the all encompassing philosophy and objectives set forth in this document.

SELECTED BIBLIOGRAPHY

1. *A Philosophy of Distributive Education*. Virginia Polytechnic Institute, Department of Education, Division of Distributive Education, Blacksburg, Virginia, 1967.

2. American Vocational Association. *Definition of Terms in Vocational, Technical and Practical Arts Education*. American Vocational Association. Washington, D.C., 1968

3. Barlow, Melvin L. *History of Industrial Education in the United States*. Charles A. Bennett Co., Inc., Peoria, Illinois, 1967.

4. Bebell, Clifford F. S. *Designing Education for the Future: The Educational Program*. Southern Colorado State College, Denver, Colorado, July 1967.

5. Brameld, Theodore. *Patterns of Educational Philosophy*. New York: World Book Company, 1965, 824 pp.

6. Coe, Burr D. "What is Quality Vocational Education." *American Vocational Journal*. Vol. 43, No. 2, February 1968, pp. 16-17.

7. DeBlassie, Richard R., and William P. Jones. *Pre-Vocational Orientation in Vocational Education for Junior High School Students in New Mexico*. Research Coordinating Unit, State Department of Education, Santa Fe, New Mexico, 1968.

8. Geissenhainer, S. W. "The Cluster Concept in Operation." *American Vocational Journal*, Vol. 42, No. 7, October 1967, pp. 26-38.

9. *General Philosophy & Objectives*. State of New Mexico, Department of Vocational Education, Trade & Industrial Division, Santa Fe, New Mexico, June, 1966.

10. *Guidelines for Cooperative Education*. The Center for Vocational and Technical Education, The Ohio State University, Columbus, Ohio, 1967.

11. *Guiding Principles, Policies, Standards and Regulations for Operation of Agricultural Education Program in New Mexico*. State Department of Vocational Education, Division of Agriculture, University Park, New Mexico, 1968.

12. Houstman, James. *Modern Business and Office Education*. State Supervisor of Office Education, Santa Fe, New Mexico, 1967.

13. Kaufman, Jacob J., Carl J. Schaefer, Morgan V. Lewis, David W. Stevens, and Elaine W. House. *The Role of the Secondary Schools in the Preparation of Youth for Employment*. Institute for Research on Human Resources. The Pennsylvania State University, University Park, Pennsylvania, 1967.

14. Lanham, Frank W., and J. M. Trytten. Review and Synthesis of Research in Business and Office Education. Center for Research and Leadership Development in Vocational and Technical Education. Ohio State University, Columbus, Ohio, 1966.

15. Larson, Milton E. Review and Synthesis of Research in Technical Education. Center for Research and Leadership Development in Vocational and Technical Education, Ohio State University, Columbus, Ohio, 1966.

16. Mager, Robert F., Kenneth M. Beach, Jr. Developing Vocational Instruction. Fearon Publishers, Palo Alto, California, 1967.

17. Marlowe, John W. "The Need for Career Planning." Industrial Arts and Vocational Education. Vol. 57, No. 2, February 1968, pp. 60, 62, 64, 66, 68, 70, 72.

18. Meyer, Warren G. and William, P. Logan. Review and Synthesis of Research in Distributive Education. Center for Research and Leadership Development in Vocational and Technical Education, Ohio State University, Columbus, Ohio, 1966.

19. Morphet, Edgar L. and David L. Jesser, Eds. Cooperative Planning For Education in 1980. Denver, Colorado, January 1968.

20. Myers, Catherine D. New Mexico Home Economics Curriculum Guide. Home Economics Division, State Department of Vocational Education, University Park, New Mexico, 1965.

21. National Association of Secondary School Principals. The Bulletin. Number 301, May 1965, Washington, D.C.

22. National Association of Secondary School Principals. The Bulletin. Number 317, March 1967, Washington, D.C.

23. National Association of Secondary School Principals. The Bulletin. Number 325, February 1968, Washington, D.C.

24. National Committee on Secondary Education. Educating for Work. National Association of Secondary School Principals, Washington, D.C., 1967.

25. National Society for the Study of Education. Vocational Education. The Sixty-fourth Yearbook of the NSSE, Chicago, 1965.

26. Ohaver, Allen R. Jr. Pandora's Box. New Mexico State University, Las Cruces, New Mexico, 1967.

27. Our School System. . . .how do we measure up? The Commission on Educational Legislation and School Finance of the New Mexico Education Association, 1967.

28. "Philosophical Foundations of Vocational Education." American Vocational Journal. Vol. 43, No. 3, March 1968.

29. Philosophy and Objectives. Albuquerque High School, Albuquerque, New Mexico, 1967.

30. Philosophy and Operating Principles of Vocational Business Education. Kansas State Board for Vocational Education, Topeka, Kansas, 1958.

31. Philosophy and Statement of Objectives. Mayfield High School, Las Cruces, New Mexico, 1967.

32. Public Law 911, Eighty-fourth Congress.

33. Public Law 85-864, Eighty-fifth Congress.

34. Public Law 87-415, Eighty-seventh Congress, S 1991.

35. Public Law 88-210, Eighty-eighth Congress, HR 4955.

36. Public Law 586, Seventy-eighth Congress, S 619.

37. Public Law 347, Sixty-fourth Congress, S 703.

38. Roberts, Roy W. Vocational and Practical Arts Education. Harper and Row, New York, 1965.

39. Roman, John C. The Business Curriculum. Monograph 100. South-Western Publishing Co. Chicago, Illinois, 1966.

40. State Board of Control for Vocational Education. Vocational Education: Philosophy and Objectives. Michigan State University, East Lansing, Michigan, 1962.

41. Sutton, Kenneth R. The Searching Man of 1980. The University of New Mexico, 1968.

42. The Bulletin of The National Association of Secondary-School Principals. Vol. 48, No. 296, Washington, D.C., December 1964.

43. The Vocational Education Act of 1963. U.S. Department of Health, Education, and Welfare. Washington, D.C. 1965.

44. Thomas, Marion. "Health Occupations in New Mexico." State Department of Vocational Education, Santa Fe, 1968.

45. Tuckman, Bruce W., and Carl J. Schaefer. Review and Synthesis of Research in Trade and Industrial Education. Center for Research and Leadership Development in Vocational and Technical Education, Ohio State University, Columbus, Ohio, 1966.

46. U S. Office of Education. Contemporary Issues in American Education. Government Printing Office, Washington, D.C., 1965.

47. Venn, Grant. Man Education and Work. American Council on Education, Washington, D.C., 1964.

48. Vocational Education. Portland Public Schools. Portland, Oregon, 1968.

49. Vocational Education in a Dynamic Society. Report of the Advisory Council on Vocational Education, 1968.

50. Vocational Education the bridge between man and his work. U.S. Department of Health, Education, and Welfare, 1968. Washington, D.C.

51. Warmbrod, J. Robert, and Lloyd J. Phipps. Review and Synthesis of Research in Trade and Industrial Education. Center for Research and Leadership Development in Vocational and Technical Education, Ohio State University, Columbus, Ohio, 1966.

52. Chase, William W., Johnny W. Browne and Michael Russo. Basic Planning Guide for Vocational and Technical Education Facilities. U.S. Department of Health, Education, and Welfare, 1965. Washington.

VT 006 281
Handbook for National FFA Officers Relative to Duties, Assignments, Travel and Leadership Training.

Future Farmers of America, Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 67 61p.

*LEADERSHIP GUIDES; *VOCATIONAL AGRICULTURE; *YOUTH LEADERS; *LEADERSHIP TRAINING; *LEADERSHIP RESPONSIBLITY; NATIONAL ORGANIZATIONS; COCURRICULAR ACTIVITES; POLICY; YOUTH CLUBS
FFA; *FUTURE FARMERS OF AMERICA

This reference explains responsibilities, policies, and regulations pertaining to the work of a National Future Farmers of America (FFA) Officer. Content includes: (1) the role of FFA in vocational agriculture, (2) duties and responsibilities of national officers, (3) general policies and suggestions, (4) service of officer to states, (5) FFA fundamentals, (6) FFA Foundation fundamentals, (7) self-improvement ideas, (8) leadership, (9) public speaking fundamentals, and (10) ideas for speaking occasions. (DM)

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VOCATIONAL
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AGRICULTURE

Handbook for National Officers

Future Farmers of America

VT 006281

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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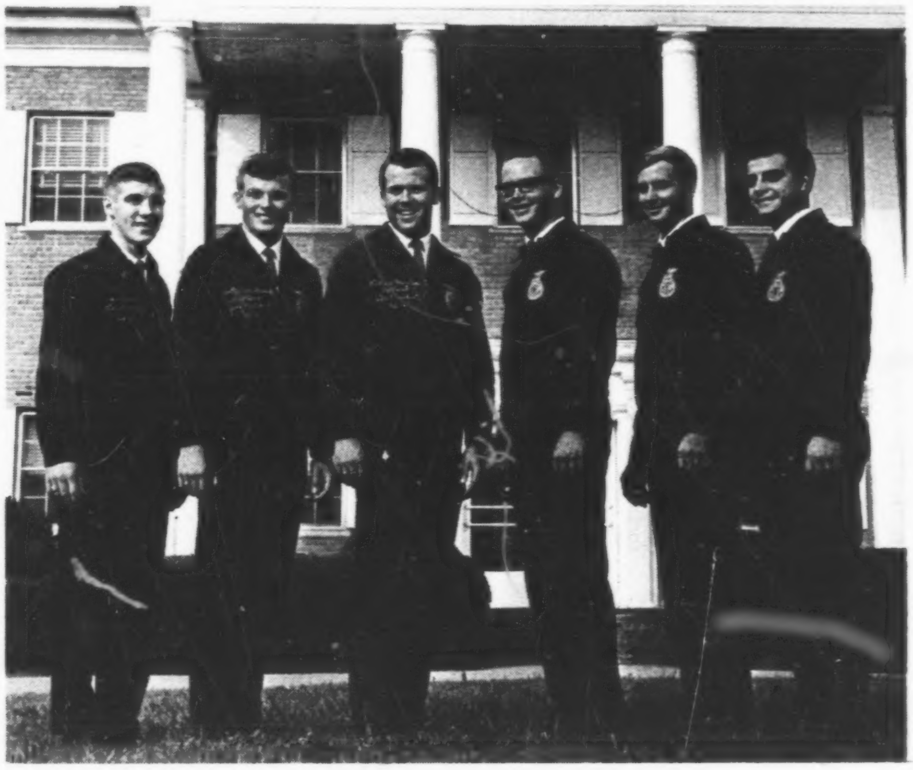
HANDBOOK FOR NATIONAL FFA OFFICERS RELATIVE TO DUTIES, ASSIGNMENTS, TRAVEL AND LEADERSHIP TRAINING



Foreword

You have been selected by your fellow members to be the leaders of the National FFA Organization this coming year. Your past record of accomplishments, your belief in the future of agriculture and the manner in which you have demonstrated those qualities of leadership which all Future Farmers should possess have helped you to be elected as a national officer -- the highest achievement in the FFA.

This accomplishment brings honor to you, your parents, your school and your State Association, but it likewise brings you SPECIFIC DUTIES AND RESPONSIBILITIES TO PERFORM AS WELL AS POLICIES THAT YOU ARE EXPECTED TO FOLLOW. There will be much for you to learn and hard work to be done. However, there will be many new experiences in store for you, pleasures to be enjoyed and higher honors and achievements to be won through the "doors of opportunity" that are now open to you.

It is imperative that you understand and follow the policies and regulations pertaining to your work as a National FFA Officer. It is essential that each officer develop a knowledge of the FFA. He should thoroughly understand his job and the duties associated with it. He must be ready to assume any assigned responsibilities in connection with FFA activities for which the National FFA Office is responsible.

Wm. Paul Gray
National Executive Secretary
Future Farmers of America

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I. THE ROLE OF FFA IN VOCATIONAL AGRICULTURE

A Federal Charter was granted to the FFA in 1950 by the U.S. Congress which resulted in the organization becoming an integral part of vocational agriculture. However, there are far too many instances where this is not followed and as a result the FFA is not used effectively in teaching. The organization integrated in the vocational agricultural instructional program, rounds out, vitalizes and motivates, the learning experiences of the students. A good FFA chapter is part of a sound program of vocational agriculture instruction.

The FFA provide students with many ways to learn more about agriculture as well as opportunities for self improvement. The teacher of vocational agriculture uses a shop to teaching agricultural mechanics, he also uses the FFA as a "teaching tool" to teach leadership and to motivate boys to set high goals and work to achieve them. With this comes pride and recognition for a "job well done". It has been said that the FFA is an intra-curricular activity having its origin and root in a definite part of the school curriculum--vocational agriculture. Thus a good functioning FFA chapter, under planned and correct "advisorship", and with a challenging program of activities enriches the instruction in agriculture. There is a close relation between the kind of an FFA chapter and the kind of program in vocational agriculture in the high school.

Teachers of vocational agriculture and FFA members should be constantly aware of the values of the FFA as it contributes to the educational objectives of the instructional program. There are many important, and quite tangible values of the FFA that effect the members, his home, the school and the community. They also relate to the welfare of all.

A. Values of the FFA to the Members:

1. Creates interest in agriculture.

2. Students learn to be leaders as well as accept and follow good leadership.

3. Members are helped to find themselves and develop confidence.

4. Provides group activities where members develop tolerance, understanding and learn to work together.

5. Develop initiative and learn to accept responsibility.

6. Students may plan and work on activities they like and are of value to them in a strong school organization that has high prestige.

7. An opportunity for students to learn to express themselves and take part in public speaking.

8. Cooperative activities where members learn to buy and sell cooperatively, finance their activities and practice thrift.

9. FFA planned activities provide for recognition of achievement.

10. The members interest in improving in his school and community is increased resulting in pride and better citizenship.

B. Values to the Home.

1. It improves the parent-son relationship and understanding.

2. Parents are provided an opportunity to have a part in their son's work.

3. Interest and improvement of the home surrounding is fostered and developed.

4. It instills desirable work habits--especially working with parents.

5. A progressive attitude is stimulated through challenges offered the students on his home farm.

6. It increases confidence and understanding of the vocational agriculture program by the parents.

7. The home provides the setting to satisfy the natural curiosity of youth in working with nature through growing livestock or crops.

C. Values to the School:

1. The FFA adds a capable, well known and strong student organization to the school that can be used to develop leadership in other students.

2. It improves the attitude, discipline and scholarship of members.

3. It provides the opportunity for school improvement (landscaping, painting, etc.)

4. Improves the cooperation between school departments, both on the teacher and the student level.

5. Increases scope of service of school to the community by "bridging the gap" between the school, the parents and the community.

6. The school becomes better known and the FFA becomes the "showwindow" of the vocational agriculture program.

D. All FFA activities should be evaluated continuously, and when activities are selected, reviewed, evaluated or revised, they should "measure up" to the following criteria:

1. Does the activity contribute to the educational objectives of vocational agriculture?

2. Does the activity motivate youth and create interest in "doing things right"?

3. Does the activity encourage preparation for a career in agriculture?

4. Does the activity provide for group participation for self improvement?

5. Does the activity provide opportunity for service and development of responsibility?

6. Does the activity provide experiences that develop the primary aim of the FFA?

7. Does the activity provide an opportunity for the FFA to become the "show-window" of vocational agriculture education?

8. Can the activity be evaluated?

II. DUTIES AND RESPONSIBILITIES OF NATIONAL FFA OFFICERS

Quite often reference is made to "Duties and Responsibilities of FFA Officers"; yet do we thoroughly understand the full meaning of this statement as it applies to National FFA Officers?

DUTY is defined as "the moral obligation to do-or not to do-that which is required of you in conduct, obedience, loyalty, and submission in relation to being an officer"; whereas, RESPONSIBILITY is defined as "the reliability, or ability to answer to one's conduct or obligations, or the moral accountability for duties". It seems quite appropriate for both words to be used when reference is made to how an FFA officer should conduct himself and perform his job in the best interests of the FFA.

The major duties of National FFA Officers are stated in Article VIII, Section B, and Article IX, Sections A, B and C, of the National Constitution. Your duty as a National Officer in relation to the National Board of Directors of the FFA is to "advise and make recommendations" in respect to the conduct of the activities and business of the organization, with the administration of the FFA the responsibility of the Board of Directors through the National FFA Office.

A full understanding of your responsibilities in relation to working with the Board and National FFA Office will encompass many qualities of leadership, together with the practice of tolerance, cooperation, loyalty, consideration, modesty, and being open-minded in your work.

Your authority as a National FFA Officer is DELIMITED when working with State staffs or State Officers. Your use of tactfulness, together with consideration and understanding of the other person's point of view, will help you perform in an effective manner. Also, your contribution will be measured in proportion to the degree you know and understand the fundamentals of the FFA, your use of good judgment, the enthusiasm you show for your assignments and the degree to which you work with dignity and a manner befitting a National Officer. NEVER "throw your weight around" because you are a National FFA Officer.

Your greatest challenge as a National FFA Office will be to exemplify outstanding qualities of leadership as you meet the thousands of members during the year. If you succeed in inspiring members to plan and reach for higher goals in self-improvement and agriculture; if you will influence others to develop themselves through their

Participation in many FFA activities and to practice their belief in the FFA Creed; if you can kindle the fire of enthusiasm so it will burn brightly and serve as a guide to ALL FFA members to help them develop those qualities of leadership which every Future Farmer should possess and take pride in--then you will have performed your duty well!

III. GENERAL POLICIES AND SUGGESTIONS

A. Each officer shall participate ONLY in assigned official activities in the region he represents, unless otherwise instructed by the National FFA Office. Exceptions may be made when in the judgment of the national office staff, the work of the FFA can be expedited.

B. Only the National FFA Office will designate official FFA activities in which you shall participate.

C. If it is impossible for you to fulfill an assignment, notify the national FFA office immediately. Another officer will be reassigned to the activity. The first officer should then wire, or write, the person responsible for the assigned FFA activity, depending upon the urgency.

D. Each officer must submit to the National FFA Office travel vouchers, itinerary or schedules, convention reports, speeches and other material or assignments as required or requested of him.

1. Travel vouchers must be in duplicate, accurate, neat, and should be submitted complete, after each official trip for which funds have been advanced. Airline, bus or railway ticket "stubs" must accompany travel vouchers for travel expense approval. Always explain any unusual expenditures on travel voucher.

2. Complete a report to the National FFA Office relative to participating experiences on each assigned official visit. This should be completed immediately following such visit, using the "State FFA Information Guide" and/or form that is provided. The report should NEVER be an evaluation.

3. Only upon request of the state advisor should a copy of the national officers' "Information Guide" form be sent to a state association. A carbon copy of the report must be sent to the National FFA Office immediately following the state convention.

4. You should submit a copy of your retiring address to the National FFA Office NOT LATER THAN SEPTEMBER 10. This draft must be typewritten, double spaced and 5-6 minutes in length.

5. Each officer is to submit to the National FFA Office a brief summary of experiences and observations of his year's activities by September 10. The Secretary will combine these into a National Officer Report for the National Convention.

E. PROMPT REPLY to correspondence to both the National FFA Office and State Advisors is a must. Credit yourself and the National Organization by being neat, use good form and official FFA stationery. Be generous and prompt with letters of appreciation (when appropriate). Keep a carbon copy of all correspondence.

F. When officers have official travel but expenses are not to be paid by the National FFA Organization, it is imperative to have a complete understanding between the officer, the party paying the expenses and the National FFA Office as to how and when the officer will be reimbursed. Suggested procedure is for the officer to pay the expenses and be reimbursed by the third party; not have the reimbursement paid to the National FFA Treasurer.

G. After a request for official services of an officer has been approved by the National FFA Office and the national officer informed, the final planning will be left up to the national officer and those making the request. The officer should send the National FFA Office carbon copies of correspondence, the itinerary and plans.

H. Each officer must submit to the National FFA Office a monthly itinerary of travel plans, speaking engagements and other planned FFA activities.

I. It is the responsibility of the national officer to write the Advisor or the Executive Secretary of the state to which he has been assigned, requesting instructions pertaining to services in that state.

J. It is imperative that plans and travel arrangements to visit a state meeting be MADE AS EARLY AS POSSIBLE, so that the state staff understands your travel plans. Such plans are to be followed by the officer to eliminate apprehension and expenses on the part of the state staff. Where plans are unexpectedly changed, the party involved must be notified immediately by phone or wire.

K. At the discretion of the National FFA Office, a past national officer may be called upon to represent the organization at certain appropriate activities.

L. All requests by national officers for FFA materials, supplies, jackets, and "P.R. gifts" MUST be made through the Executive Secretary, except where the officer is purchasing the ordered items.

M. The list of suggestions apply generally and will be most valuable in fulfilling your responsibilities as a national officer.

   1. You are representing the largest farm-boy organization in the world. Alas, take heed.

   2. The eyes of many will be on you. What you do and how you do it should leave a favorable impression. Watch your conduct. Avoid anything that might be questioned.

   3. Be neat in your dress and personal appearance. Wear your FFA jacket, white shirt and FFA tie on proper occasions.

   4. A haircut often is a good investment. So is a shoe shine and (for some) a shave. A clean shirt and pressed trousers add to your appearance.

   5. Set the right example for other FFA members to follow. They look up to you as "a model".

   6. Be courteous. The words "Please" and "thank you" pay good dividends. Use them often.

   7. Be careful what you say and how you say it.

   8. Plan to make the most effective use of your time and money.

   9. Do not commit yourself orally or in writing unless you are certain that you can keep the commitment.

   10. Keep all appointments. Plan to arrive ahead of your scheduled activities.

   11. If you must smoke, use good judgment in doing so. Better yet, try to avoid it altogether.

   12. Learn all you can about the FFA on a national level. Study the Manual, FFA Foundation material, The National Future Farmer, Official FFA Calendar Kit, and other texts and material when you complete the assignments given to you. You will have many opportunities to use this knowledge and demonstrate your competency.

13. Make a special effort to remember people's names. Keep a record of the people you meet in the notebook provided you.

14. Be prompt in All your correspondence. This is especially important relative to Good Will Tour responsibilities, State Association activities and other events in which you have a part.

15. Develop ability to work with groups. Know parliamentary procedure. Be able to preside over meetings and know how to properly delegate responsibility. Be able to recite the Creed.

16. Develop ability to get acquainted with people by showing a liking for their interests and hobbies; make them feel like you want to learn more about them.

17. Be yourself, confident, humble, friendly, well poised--and SMILE.

18. Be sincere and loyal to your friends as well as those with whom you work.

19. Avoid "smutty" or off color jokes or stories.

20. Be well prepared for each activity (or assignment).

21. Plan your public speaking so you will be effective, inspiring, interesting and accomplish your assignment(s). Be sure you have "earned the right to speak upon your subject."

22. Be willing to make sacrifices in order to meet your officer obligations.

23. Be industrious and perform your work with enthusiasm, but refrain from being a "show off."

24. Make all FFA members feel they are important to the FFA.

25. Be prepared to give your personal background and experience in agriculture and FFA in order to develop enthusiasm, create interest and inspire members to higher goals in the FFA.

26. Know what you are talking about. Refrain from commenting on, discussing or arguing about controversial topics, (ie. topics relating to farm issues, government policies, political issues, racial situations. You have been informed as to how to discuss or avoid situations of this nature.)

If you do, make it clear that it is your thinking, not that of the FFA.

27. Avoid philosophizing when you speak. Leave out the phrase "I think." Talk about your work experience program, FFA experiences, or the accomplishments of other outstanding FFA members. Use topics of interest to those who are listening.

28. ALWAYS be a good listener, but at the same time be a GOOD CONVERSATIONALIST.

29. Never make a statement that be be interpreted as an endorsement or implied endorsement by the FFA of any products, brand, breed, feed or equipment.

30. Fellow FFA members are not "GUYS," but you refer to them as "fellows," or "FFA members,' or, better yet, call them by their first names when it is possible.

31. When speaking with or about important or older gentlemen, they are always referred to as "Mister."

32. Be cautious when talking with your fellow officers in public not to be critical of anyone-and avoid "griping!"

33. ALWAYS find something GOOD to say or talk about such topics as farming programs, communties, leadership training, or a State convention program. Also, you lose fast when you remark "My State does it this way" or "You are really wrong...etc."

34. Always be "sharp" when in the presence of ladies.

35. Act interested, be friendly and SMILE; also remember that the words "Sir," "Thank you," and "Pardon me" are most appropriate to use at the right time or place.

36. Remember your family. Sacrifices they have made for you can be partly repaid by your being humble, cooperative, appreciative--and remember them by a note or small token when you are away from home.

37. Remember--your appearance, your personality, what you say and do will influence the opinions of members and people. Each officer has a moral obligation in "setting the stage" for continued improvement of FFA through the inspiration he gives to chapter members, advisors and others.

IV. OFFICER TRAVEL AND EXECUTION OF DUTIES
AUTHORIZATION - POLICIES - OTHER EXPENSES - HINTS AND INFORMATION

AUTHORIZATION

A. A national officer will find that many requests will be made of him to travel and participate in activities which might benefit from the prestige of the officer. It is imperative that you understand the difference between official and unofficial travel. Therefore:

1. OFFICIAL travel is travel authorized by the National FFA Office and generally includes travel to participate in FFA activities on a state, regional or national level. This travel is reimbursed.

2. UNOFFICIAL travel is not authorized by the National FFA Office and generally included banquets below the state level, field days, contests, fairs, banquets, school visits, camps, visits to officers' homes, friends or sightseeing. This travel is not reimbursed.

B. You are not expected to attend every FFA activity or event on a local district or state level to which you are invited. Should this be an unofficial activity for the national officer, travel expenses to the activity will not be reimbursed by the National Organization unless your participation is authorized by the National FFA Office.

C. You should NOT accept invitations from a local, district or State association level unless you first have the approval of the State Advisor of the state from which the invitation was extended. The National FFA Office is to be informed of such an activity by the officer, who will also request the State Advisor or Executive Secretary to inform the National FFA Office of his approval.

D. Use judgment in accepting invitations from all levels because of the possible sacrifice of time, school, farming program or yourself. When you participate in any FFA activity, do not infringe upon duties and responsibilities of either local or state officers.

E. Only official assignments are to be participated in during the one month prior to the National Convention.

F. The National FFA Office has the final authority to select any national officer to represent the FFA organization on any foreign assignment or educational exchange program.

POLICIES

A. Each officer should use the form of common carrier (plane, train, bus) most convenient, but if a special conveyance or a privately owned conveyance is used, the reimbursed travel will NOT be greater than the cost of common carrier for the trip involved. Travel first class is authorized when tourist or coach accommodations are not available.

1. An exception may be made where it is impossible to make plane, train or bus connections.

   a. In this case, an explanation should be made on the officer's expense voucher which you submit to the National FFA Office.

   b. A maximum of 9 cents per mile will be allowed for official use of privately owned automobile, and will be based upon actual point-to-point (city to city) mileage.

   c. When you park a car over an extended period of time, submit the parking receipt and an explanation for the expense with the voucher.

   d. There is no maximum poundage for baggage when traveling by plane and you are allowed to "check through" two bags. Be sure to always carry your briefcase on board with you.

   e. Taxi fare is reimbursable only when bus, limo, or streetcar is not available or convenient. Use airport limousine only whenever the fare is less than taxi. Remember, two or more can share taxi costs for a total cost less than limousine.

   f. You are expected to wear your official FFA jacket and FFA tie when on official travel--who knows when you will meet or make a friend for the FFA.

   g. Always leave an up-to-date itinerary at home so you can be reached by your parents or the National FFA Office.

   h. Submit to the National FFA Office a travel and meeting schedule for each month.

   i. Interested persons on the "other end" appreciate being notified of arrival and departure times.

j. Use one-day laundry and dry cleaning when available-they may be your only chance to keep your clothes looking sharp.

OTHER EXPENSES

A. You will be allowed adequate expenses for subsistence; but you are also expected to use judgment when spending FFA funds for meals, lodging, laundry, cleaning, pressing, cabs and services.

1. Expenses are allowed for haircuts on the Good Will Tour, or where you are away from home for more than one week.

2. Expenses are allowed for official postage, telegram and phone calls ONLY. Resort to a phone call only if the matter cannot be handled by correspondence.

3. Each Vice President is allowed $100 for secretarial expense for correspondence. The Secretary and the President are allowed $125 and $200 respectively. (maximum)

4. You should report secretarial expenses for correspondence on a separate voucher form in duplicate.

5. Of course, expenses are not allowed for personal items such as refreshments, treats, TV in hotel rooms, movies, entertainment, unofficial travel, personal telephone, personal toilet items and gifts.

HINTS AND INFORMATION

A. Recommended Articles.

1. An American Express card will be issued to you to use for identification only. Please use only in an emergency.

2. You will want to carry $100 in travelers checks for emergencies or when it is impossible to cash a personal check.

3. Sufficient cash balance will be provided you for official activities. however, for this balance to be kept up to date you are expected to submit travel vouchers after each trip-or weekly on the Good Will Tour. No voucher-no money!

4. Baggage

   a. You will need a durable two-suiter suitcase of light weight construction.

   b. A new briefcase will be given to you upon assuming office.

5. Essential Clothing

   a. Two pair dark slacks with one matching sport coat, dark shoes, several pairs dark conservative sox, two suits of underwear, one white (drip-dry) shirt, one pair of wash and wear slacks, and handkerchiefs. A topcoat, rubbers and gloves will be needed on the Good Will Tour.

   b. During the year the National Executive Secretary will authorize the following be given to each officer:

1 - White Shirt	(October)
2 - White Shirts	(January)
2 - FFA Neckties	(October)
4 - FFA Jackets	(October-January-May-September)

   c. Necessary toilet articles.

   IMPORTANT: Learn to travel light. The total weight of your baggage, including briefcase, should weigh approximately 40 pounds.

B. Plane reservations

1. Make reservations at least four weeks in advance where possible.

2. Travel tourist (or coach) whenever possible.

3. Cancel all reservations at least 24 hours in advance if they are not to be used. Failure to do so will result in your being LIABLE TO A FINE by the airline.

4. Claim your seat 30 minutes before departure.

5. Always follow re-confirmation of flight-rules. (This eliminates possibility of cancellation of your reservations if you have changed flights.)

6. Each officer is responsible to make his own reservations and to re-confirm his flights. (Take turns on Good Will Tour)

C. Traveling by train

1. Make advance reservations unless you plan to travel by day coach.

2. Always inform the porter as to time you desire to be awakened in the morning. Usually, it is best to tell him the length of time before arrival that you should be called, rather than a definite time. Trains sometimes run late. Also, you may change time zones overnight.

3. If you plan to eat on the diner, keep in mind it often takes longer than when going into a restaurant. Therefore, if you have a time schedule to keep, plan accordingly.

4. Use care in protecting your valuables at night.

5. Avoid loud talking or disturbances late at night.

D. Hotel Suggestions

1. Hotel reservations should be made well in advance. Always request MINIMUM priced rooms.

2. Ask price of a hotel room before you accept it. It it seems too high, ask for a lower priced room.

3. Always cancel hotel reservations if not used.

4. If you expect to arrive late, always notify hotels well in advance so they will hold your room "For Late Arrival."

5. Cashing checks at a hotel.

    a. Make arrangement WELL IN ADVANCE with the manager, or cashier, when you will desire to cash checks. Be sure to give information relative to the amount of the check. Be prepared to present proper identification.

    b. When traveling in a group, or remaining in hotel for several days, officers will rotate roomates as per instructions; only exception is when officers are assigned rooms together, such as the National FFA Convention.

6. Occasionally one officer will pay the cost of a meal for all officers, or officers may alternate paying for the room. When this is done, explain on the back of the voucher.

E. Tipping

1. It is the accepted custom to always tip 10 percent for meals and taxi.

2. Give a 25 cent tip to bellhop when he takes you to your room or a total of 50 cents when two officers stay in one room.

3. Bellhops answering room calls expect tips.

4. Pullman porter tip - 50 cents (including shoeshine).

5. It is a good idea to carry enough change for tips.

V. SERVICE OF NATIONAL OFFICERS TO THE STATES

A. Each State Association will complete request for national officer on a form provided by the National FFA Office. Deadline date is January 10th to submit form to National Executive Secretary.

B. Assignments of national officers to State Convention will be made in January during officers leadership training in Washington.

C. President is rotated to states as often as possible. A record is kept each year on officer assignments.

D. A state may request a national officer to arrive early for pre-convention work with state officers, and where no conflict exists, upon request he may remain over for post convention orientation with newly elected officers. Each national officer will NOT become involved in leadership training unless he is requested to by the state staff member in charge of officer training.

E. A State Association may make request through the National FFA Office for a national officer to assist with state officers leadership training. Every reasonable effort will be made to fulfill the request.

F. The National Organization is to pay the travel and subsistence expenses of the officer from the time of departure from his home until his arrival at the State Convention or other official activity, and from the time of departure from the state headquarters to his home, or to the next assigned official FFA activity.

G. The state association is to pay the subsistence expense of the officer during the time he is in attendance at the state convention, or during his participation in other OFFICIAL FFA activities, which fulfills an invitation or request of the state he is visiting.

H. In the event two national officers are requested by a state for an FFA activity*, assignments will be made by the National FFA Office with the understanding that:

   1. The state shall reimburse the travel and subsistence expenses (during travel) of the officer who travels the greatest distance. It is the responsibility of this officer to present the state advisor a statement of expenses incurred during travel to and from such state activity.

   2. The national officer representing the region in which the state is located shall assume the major national officer responsibilities at the State Convention or FFA event.

   *It is recommended to NOT involve more than ONE national officer at a state convention or activity. Two national officers should NEVER be requested for a local banquet or activity.

I. Upon assignment a national officer should show willingness to accept responsibility in connection with any state activity, perform service and give assistance when he is asked or where needed. You should NOT INFRINGE on the duties or responsibilities of any state officer, whether at a convention or any other FFA activities.

J. You may "remain over" in the state between state conventions providing:

   1. It is more economical for you to remain over.

   2. You participate or attend other official assigned duties in the state.

   3. You are a guest of state officer(s) or past or current national officer(s) or others (non-official). In this event you will not be entitled to travel reimbursement or subsistence except to return home or to other assigned official duties.

K. Where more than one national officer is assigned to participate in a national, regional, or sub-regional leadership training program involving state officers, the National Organization will assume the officers' expenses for travel and subsistence for the conference.

L. When you participate in a state convention:

1. One of the most important things for you to do is to write the State Advisor or National Executive Secretary well in advance in order not to cause delay in convention planning!
2. Know as much as possible about the state before you visit. (Refer to convention proceedings, National FFA Office files, state newspaper or magazine. You should also request information from the state office.)
3. Be PROMPT in your arrival, be RESTED and READY FOR WORK.
4. Get acquainted with as many members as possible. (You can't do this serving on the nominating committee, or working entirely with state officers.)
5. Be alert to all that is happening. Sit close to the Executive Secretary's station; avoid visiting while convention is in session.
6. Always have proper reference material in your briefcase with you.
7. Spend as much time living with the officers as possible--AVOID staying at a fraternity house, or at a motel by yourself.
8. Be alert to meet donors to the FFA Foundation. Note how the State Association recognizes the donors and presents National Foundation Awards. If asked for suggestions, be ready to help.
9. Keep in mind the FFA is a school sponsored organization, therefore, never fail to recognize it's place in the instructional program.
10. While at the convention, or during your "Greetings," invite questions about FFA activities as you visit with members. Avoid getting "over your head" in answering questions. If you do not know answers or you are not qualified to speak on the topic---say so!

11. Members may be interested in what other states or chapters are doing, as well as what is being planned or is happening on the national level--so be prepared!

12. Your main task is to inspire chapter members to take advantage of FFA opportunities, to set and reach higher goals in their FFA work. Therefore, your address and actions should be geared to this goal.

    a. Avoid being a "know it all" or getting into the area of "advising". Just talk about FFA.

    b. Encourage members to enter chapter, state and national activities.

13. Compliment members and chapters as much as possible on accomplishments.

14. DO NOT BE CRITICAL. If there are weak points which officers of the state convention desire to discuss, try to do this in a diplomatic and constructive manner. Remember: pride, once hurt, is often difficult to mend. It is best never to criticize anything unless YOU HAVE THE ENTIRE STORY.

15. Never tell off-color jokes--better yet, do not tell jokes.

16. USE FFA MEMBER OR CHAPTER STORIES TO ILLUSTRATE POINTS--these are meaningful to members.

17. As a National FFA Officer you were elected because of your accomplishments in agriculture, leadership, scholarship and being a good citizen in the school and community--try to use these to good advantage.

18. Meet as many members in attendance as possible, shake their hands, learn about each boy's desires, invite them to the national convention, encourage them to strive for higher goals.

19. Thank the State Advisor, Executive Secretary, and School Administrator (if present) for granting you time for your visit.

20. Ask the State Advisor or Executive Secretary to discuss your performance with you upon conclusion of the convention.

21. Your visit should be--

    a. Stimulating, inspiring and a challenge for others to become an officer, a State Farmer, an American Farmer or a National Officer.

    b. Gratifying to you.

    c. Evaluated and improved by your to make your next convention visit better.

22. Follow-up on any State FFA Activity.

    a. Write a letter thanking the association (or group) for its hospitality and mention other kindnesses extended to you or items of special interest.

    b. Keep a record of outstanding members, state officer candidates and others, and write them letters of encouragement.

    c. Record the names of individuals you wish to remember and review this list prior to attending activities where they may be in attendance.

VI. FUNDAMENTALS TO KNOW ABOUT THE FFA

A. Your effectiveness as a national officer will be enhanced by knowing the following:

1. What is the place of FFA in the program of vocational agriculture?

2. Why was the FFA organized?

3. What are the "building stones" of the FFA, and how do they contribute to the development of young men into well trained agriculturalists who are good citizens and leaders in their communities?

4. What are some unique features of the FFA?

5. What would you say are the main values of the FFA to:

   a. The community
   b. The home
   c. The school
   d. Our nation
   e. The advisor
   f. The member
   g. Development of International understanding and agriculture
   h. To each member

6. As you look back over your experiences in the FFA, why did you join the organization, and how does this reason compare to what it has meant to you?

7. If a donor to the FFA who was also a supporter of the 4-H asks you "what is the difference between the FFA and the 4-H," how would you answer him?

8. Relative to the administration of the FFA, know the following:

   a. What is the Board of National Officers?
   b. What is the Board of Directors?
   c. Who is on the Board of Directors and how are the members elected?
   d. What are the duties of the Board of Directors?
   e. What is the Governing Committee? What is its purpose and who is on it?
   f. What is the Board of Trustees?
   g. Who is on the Board of Trustees and how are the members elected?
   h. What is the relationship of the Board of Directors and the Board of Trustees of the FFA?

9. What is the relationship of the Board of National Officers to:

   a. National staff, National Advisor, National Executive Secretary, Program Specialist and Regional Program Officers?
   b. Board of Directors?
   c. Board of Trustees?
   d. State Advisor and/or Executive Secretary?
   e. The State Association of each national officer?
   f. State Association Officers?

10. Whare are the specific (major) duties of each national officer?

11. What are your responsibilities as a national officer?

12. Referring to the FFA manual, what are your responsibilities to:

    a. Groups or persons in the national organization?
    b. Groups or persons in the state association?
    c. Groups or persons in the local chapter?

13. What specific areas of authorization, if any, do you have as a national officer?

14. What is the legal authority for the operation of the Future Farmers of America? (Who was responsible for this, and why was it done?)

15. How may amendments to the national constitution be made?

16. Is the FFA a Government organization? -- Explain

17. Referring to reference materials on the major farm organizations:

    a. Be familiar with the aims, objectives and pruposes of each organization.
    b. Know the top leaders of each organization.
    c. Be clear on the work each organization does for farm youth.

18. In what way will the above information be of value to you and how will you use it? What precautions should be taken relative to the use of this information?

19. It is essential you have a good understanding of or know the following:

    a. What has been the history of the FFA?
    b. What are the purposes of the FFA?
    c. How does the organization operate?
    d. What is a program of activities and how is it developed?
    e. What are the essentials for good chapter operation?
    f. The essentials of good officer training on the local and state levels.
    g. All ceremonies for FFA meetings and degrees.
    h. Future Farmers Supply Service.
    i. The National FUTURE FARMER Magazine.
    j. Official FFA Calendar.
    k. Parliamentary Procedure.
    l. National FFA Week.

20. What policies govern the use of and authorization for use of the name and emblem of the FFA?

21. How is the FFA financed? (Be familiar with the budget.)

22. What are good guidelines for money making activities?

23. What are good guidelines for planning and conducting a program of activities?

24. What is meant by the "proper relationships" of the national, state and local levels of operation?

25. What are the relationships of the National FFA Constitution, State Statute Law, P.L. 740 and the 1963 Vocational Education Act?

26. Explain the history, purposes and accomplishments of the FFA International Education Programs?

VII. FUNDAMENTALS TO KNOW ABOUT THE FFA FOUNDATION, INC.

A. The FFA Foundation greatly benefits FFA members. Your knowledge of the following is essential:

1. When was the FFA Foundation, Inc. organized?
2. Why was the FFA Foundation organized?
3. What are the purposes of the Foundation?
4. How is the Foundation administered?
5. How is the Foundation financed?
6. Regarding the Sponsoring Committee--
    a. Who organized it? Who serves on it? How are members elected?
    b. What is its function?
    c. What are the responsibilities of the Chairman of the Sponsoring Committee?
        (1) Who selects the Chairman?
        (2) When is he selected?
    d. Who was the first Chairman?
    e. Who was the Chairman the past year?
    f. Who is the current Chairman? Vice-Chairman?

7. What is the Advisory Committee to the Foundation, and what is its function?

8. What has been the trend in contributions, expenditures and the reserve fund?

9. What is meant by the FFA Foundation Incentive Awards Program?

10. Regarding the Star Farmer Awards?

    a. What is the basis for determining this award on various levels of achievement?
    b. Who selects the recipients of the Star Farmer awards on various levels of achievement?
    c. What awards are given to Star Farmers?

11. Regarding the Agricultural Proficiency Awards--

    a. In what areas are Proficiency Awards provided?
    b. What special achievements are recognized?
    c. What awards are given?

12. Answer the following questions on the two chapter award programs--National Chapter, and Chapter Safety.

    1. What are the purposes of this award program?
    2. What types of awards are presented?
    3. What are the requirements for a chapter award?
    4. How many chapters are eligible for the chapter award?
    5. How are the National Chapter Award winners selected?

13. What other contests and awards programs are sponsored by the FFA Foundation? Explain each fully as to purpose, eligibility and awards given.

14. What policy determines whether a donor should contribute to the National Foundation or to a State Foundation (if one exists)?

15. What recommendations do you have for a State Foundation relative to:

    a. Its purpose
    b. Its organization
    c. Who should contribute
    d. How it can supplement the work of the National Foundation

16. If you are asked to present Foundation awards at a state convention, what important points should you emphasize in your remarks.

17. What is the relationship of the Foundation to the judging contest?

VIII. PROBLEMS YOU MAY ENCOUNTER

National Officers are often asked many questions by FFA members or advisors. It is imperative you be familiar with the Fundamentals of the FFA to give a good answer which must be based upon sound judgment. However, if you do not know the answer, do not "guess". Be frank in stating you do not know, and that you will attempt to find the correct answer. The following are questions asked or problems encountered by officers:

1. How can officers develop more enthusiasm and interest among fellow chapter members?
2. Where and how should a beginning FFA member start his leadership training in the FFA?
3. In electing State officers, is it best to have a nominating committee or run a campaign? Why?
4. How can a member develop self-confidence?
5. How can membership be increased in a chapter?
6. A Chapter is located in an urban area; what can be done about supervised work experience programs and equal opportunities for attaining awards?
7. A member has just graduated from high school and suddenly realized the importance of leadership training; what can be done since he will not be in contact with the FFA?
8. What advice would you give a Green Hand who wants to become a national officer?
9. What different activities do national officers participate in during their term of office?
10. Why should a member continue in the FFA after graduation from high school?
11. How can a member become a good State officer?
12. What interesting things can be told about the other national officers?
13. How did you get your start in the FFA and eventually become a national officer?

14. What is farming like in your area of the country (State or region)?

15. Explain your farming or work experience program.

16. What are you going to do after you finish college?

17. How can a chapter make money as well as prepare a sound budget?

18. How is the FFA financed (national and state level)?

19. Who owns The National FUTURE FARMER Magazine? How administrated?

20. Who owns the Future Farmers Supply Service? How administrated?

21. How are the FFA Magazine and Supply Service governed?

22. Why should a member continue in the FFA if he is preparing for a career in agriculture?

23. How have you benefited from serving the organization as an officer?

24. What is the difference between the FFA and 4-H?

25. A member's parents do not want him to farm, or enter into an agricultural career, but he does. What advice do you give?

26. What should an officer, or member, do when he sees an FFA member smoking in his jacket in public? When the jacket is improperly worn?

27. What should be known about the FFA to be a good officer? To be a good member?

28. How can a member become a good leader?

29. Who can be an associate member and what does it mean?

30. Where are Chapter pins, the State farmer charms, trophies and awards obtained?

31. Who pays for the travel of the national officers?

32. What can members do to get new and more interesting business on the State convention program?

33. What are methods used to get more delegate discussion at State conventions?

34. What are your duties at State Conventions, especially working with officers?

35. How and who does a member thank for a Foundation award?

36. How do chapter members get their advisor to "advise" rather than "do" things for the chapter?

37. What training in the FFA do you receive as a National Officer?

38. What are the purposes of a Good Will Tour?

39. How does a member qualify for the National FFA Band, Chorus, Talent Show or other activities at the National FFA Convention?

40. How do you prepare your speeches?

41. What are the most serious faults that need to be corrected for a chapter to improve its Parent-Son Banquet?

42. Should a national officer commend a State Convention when a majority of the activities on the program, or the related activities or performance of the officers are considerably below average?

43. What governs a national officer's remarks relative to suggestions and recommendations for the benefit of a State convention?

44. How does the national FFA organization operate?

45. Who has the final authority on FFA matters, the convention delegates or the Board of National Officers and Board of Directors? Why is this so?

46. Where girls are members in a chapter, what are the duties of both boys and girls to make certain each member projects the "best image" of FFA, and every student obtains the most from the FFA?

47. A member has just been defeated in running for State office; what advice would you give him?

48. What are the purposes of a FFA convention?

49. How can State officers be "positively encouraged" to learn their parts for FFA ceremonies and rituals?

50. How do other States get advisors to show more interest in the convention program?

51. What is the National Officers' responsibility in working with State Officers:

    a. Leadership training for state officers.
    b. Pre-convention meetings.
    c. Post-convention meetings.
    d. Regional Leadership Conferences.
    e. Leadership workshops involving youth organizations in other vocational education services (i.e. FHA, DECA, VICA, and OEA).

52. Is a school offering technical training in Agriculture eligible to organize a FFA chapter?

53. How important is scholarship and advanced training in agriculture beyond high school graduation?

54. What is the history of the National FFA Center? What are plans for the future?

55. What are possibilities for future leadership training for FFA members?

56. What are the purposes of Regional Leadership Conferences involving State Officers?

57. Explain the National FFA Archives?

58. Explain the official FFA Calendar program as to:

    a. Purposes.
    b. Plans for Chapter involvement.
    c. Costs of each kind of program.
    d. Administration, pictures, etc.

59. Who develops National FFA Week material? Where can the materials be obtained?

IX. SELF IMPROVEMENT IDEAS

Occasionally it is good for a National Officer to "take stock" of himself as to where he is, where he is going, how to get there and how well he performed reaching his goals. The following should be reviewed periodically--and in a fair manner.

A. To be a Better Officer

1. Think and act straight.
2. Get the facts and analyze them before you draw conclusions.
3. Get the habit of cleanliness and orderliness.
4. Set up reasonable goals and reach them.

    Aim - an ideal or hope
    Goal - a target to be hit
    Objective - measurable progress toward a goal

5. Take advice, but do your own thinking.
6. Encourage the other fellow as you go along.
7. Never admit to yourself that you are licked (beaten) permanently.
8. Spend a little less money than you make.
9. Make friends, then keep them in good repair.
10. Dream on what you would like to help bring about (accomplish).
11. Be proud of what you do--take pride in being a National FFA Officer, but earn it.

B. Six Ways To Make People Like You

1. Become genuinely interested in others.
2. Smile.
3. Remember that a man's name is to him the sweetest and most important sound in any language.
4. Be a good listener. Encourage others to talk about themselves.
5. Talk in terms of the other man's interests.
6. Make the other person feel important--and do so sincerely.

C. Personality Self-Rating Scale

Circle appropriate number following each trait. Five is outstanding, four is excellent or considerably above average, three is average, two is mediocre and one is poor. Total your score below.

1. Do I maintain a well-groomed appearance? 1 2 3 4 5
2. Is my posture alert and poised? 1 2 3 4 5
3. Do I have a pleasing voice? 1 2 3 4 5
4. Is my disposition cheerful? 1 2 3 4 5
5. Do I make friends easily? 1 2 3 4 5
6. Do I exert positive leadership? 1 2 3 4 5
7. Am I generally thoughtful of the feelings of others? 1 2 3 4 5
8. Is my enthusiasm sincere and contagious? 1 2 3 4 5
9. Do I persevere until I achieve success? 1 2 3 4 5
10. Am I sincere in my interest in other persons? 1 2 3 4 5
11. Am I ambitious to get ahead? 1 2 3 4 5
12. Do I get along well with others? 1 2 3 4 5
13. Do I react constructively to criticism? 1 2 3 4 5
14. Do I remember names and faces? 1 2 3 4 5
15. Am I punctual on all occasions? 1 2 3 4 5
16. Do I have and evidence a spirit of cooperation? 1 2 3 4 5
17. Am I free from prejudice? 1 2 3 4 5
18. Do I know how and why people react in most situations? 1 2 3 4 5
19. Do I refuse to allow what other people say to hurt me? 1 2 3 4 5
20. Am I generally a good listener? 1 2 3 4 5
21. Can I criticize without giving offense? 1 2 3 4 5
22. Do I enjoy being part of a group? 1 2 3 4 5

23. Do I usually like people for what they are (or do I wait to see if they like me)? 1 2 3 4 5

24. Am I reliable? 1 2 3 4 5

25. Can I adapt myself to all situations? 1 2 3 4 5

Total Score. . . . .

And now to evaluate your scores--If your score totaled over 100, your personality rating is definitely superior. And, if you've been honest with yourself, you are among the people who are most likely to succeed. 90-100 is above average. 75-90 is average. Below 75 shows plenty of room for improvement.

D. Rules For A Perfect Day

1. Just for today, I will try to live through this day only, Not tackle my whole life problems at once. I can do some things for twelve hours that would appall me if I felt that I had to keep them up for a lifetime.

2. Just for today, I will be happy. Abraham Lincoln said, "most folks are about as happy as they make up their minds to be." Happiness is from within--it is not a matter of externals.

3. Just for today, I will adjust myself to what is, Not try to adjust everything to my own desires. I will take my family, my business and my luck as they come and fit myself to them.

4. Just for today, I will take care of my body. I will exercise it, care for it, nourish it and not abuse nor neglect it so that it will be a perfect machine.

5. Just for today, I will try to strengthen my mind. I will study. I will learn something useful. I will not be a mental loafer all day. I will read something that requires effort, thought and concentration.

6. Just for today, I will exercise my soul in three ways. Do somebody a good turn and not get found out (if anybody knows of it, it will not count). I will do at least two things I don't want to do--just for exercise. I will not show anyone that my feelings are hurt. They may be hurt, but today I will not show it.

7. Just for today, I will be agreeable. I will look as well as I can, dress becomingly as possible, talk low, act courteously, be liberal with flattery, criticize not one bit nor find fault with anything, and not try to regulate nor improve anyone.

8. Just for today, I will have a program. I will write down just what I expect to do every hour. I may not follow it exactly, but I'll have it. It will save me from the two pests--hurry and indecision.

9. Just for today, I will be unafraid, especially I will not be afraid to be happy, to enjoy what is beautiful, to love and to believe that those I love, love me.

E. Working Effectively With Individuals and Groups

1. A FFA Officer must have a good working knowledge of the FFA, and know how to promote the FFA program with all whom he meets, such as:

    A. FFA members, other officers, parents, adults, advisors, school administrators, and FFA Foundation Donors.

    B. Other youth organizations, farm organizations and civic clubs.

2. In order for a FFA officer to make a good impression on those he meets and works with, it is most important he cultivate the following:

    A. Leadership and ability to work with groups.

        1. Know parliamentary procedure. Be able to preside over meetings and properly delegate responsibility.

    B. Know how to get acquainted with people.

        1. Like people, know their interests, hobbies, make them feel like you want to learn more about them.
        2. Know the names of people you meet or with whom you work.

    C. Learn to cooperate with others. The ability to get along with others must be acquired. Develop understanding and tolerance and respect the rights and opinions of others. Teamwork between officers and adult supervisors is of primary concern in carrying out all FFA activities.

    D. Be industrious, aggressive and perform your work to the best of your ability.

E. Be well prepared for each activity (or assignment).

F. Plan your public speaking so you will be effective, interesting and accomplish your assignment(s).

G. Be willing to make sacrifices in order to meet your National Officer obligations.

H. Demonstrate self-confidence at all times, but remember that an officer with too much ego is not liked.

I. Make all FFA members feel they are important to the FFA, practice being a good listener to their stories or problems about FFA.

J. Be well prepared to give your personal background and experience in agriculture and FFA so it will be accepted and develop enthusiasm, create interest and inspire members to higher goals in the FFA.

K. Be sincere, loyal to your friends and your organization.

L. Remember--your appearance, your personality, what you do and say will influence the opinions of members and people. Each National officer has a real obligation in "setting the stage" for continued improvement of FFA in the National Organization through the inspiration he gives to members.

F. Introductions (Practice at every opportunity)

1. Being introduced to others:

a. Look the new acquaintance in the eye when extending your hand. Smile! Grip the new acquaintance's hand firmly - no bone crushing, but no dead fish either!

b. Ask the name again if you misunderstand it. Use the new acquaintance's name as soon as possible to help remember it. Acknowledge an introduction with, "How do you do, Mr. (name)".

c. Boys and men always rise to their feet when being introduced to anyone--even another male. Men and boys wait for the girl to extend her hand, because the choice rests with the lady between shaking hands and not shaking hands. If in a group, don't extend hand to acquaintance in front of others.

d. After an introduction a brief conversation usually follows. When you are ready to leave you should express your pleasure for having made the new acquaintance with, "I hope to see you again," or "I have enjoyed meeting you". To which the proper response is "Thank you". Remember--First impressions are extremely important.

2. Introducing others:

   a. Name first the older, more distinguished, the lady or girl - then the other person. Introduce people in an easy, nonchalant, friendly manner. Have names clearly in mind before introducing the two parties. Pronounce both names distinctly and slowly.
   b. Common introductory phrases often used are:

      "Mr. (older person), may I present Mr. (younger person)."
      "Mother, I want you to meet, Mr. __________."
      "Dad, this is Bill Jones, a fellow FFA officer."

   c. After giving the introduction give cues for conversation such as:

      "Mr. __________, this is Joe Smith who went fishing with me last summer."

   d. If introducing one person to a small group, you may say, "I want all of you to meet my friend Dick Black. Dick, this is Ruth, Sue, Al and Johnnie." (Avoid pointing to individuals as they are named.)

G. How to Remember Names

1. First Step: Impression

   a. Hear the name clearly. If you don't hear name clearly, say "I am sorry I didn't get your name, will you please repeat it?" If still not clear, it is proper to ask him to spell it for you.
   b. Get a clear impression of him as a person. Think of only the name when being introduced to someone. Observe facial expressions, color of hair, complexion, smile, etc.. Get clear impression of size--short, thin, tall, etc.. Get a distinct impression of his voice--husky, thick, drawl, etc..

2. Second Step: Repetition

   a. When introduced to a man, repeat his name immediately. Say, "How do you do, Mr. ____________." Repeat the new acquaintance's name silently to yourself while he is talking.

b. If introduced to a group of people at one time, concentrate intensely on each name as you hear it. Between introductions, look at man you were introduced to and repeat his name to yourself rapidly. After all the introductions, immediately glance back at the group and try to recall the name of each.

c. Refresh your memory of a person's name immediately before you are to see him. If possible, make conversation about the man's name. When you part from the person you have just met, say his name again. " I am glad to have met you, Mr. Blake." Review the names you wish to remember each night before you retire.

3. Third Step: Association

Try to associate the name with business, rhyme, appearance or personality character, meaning, mind picture, or similar name.

H. Ways of Starting Conversation

1. With FFA Member:

a. Discuss or ask questions about: The family farm or his family, Vocational Agriculture interests, such as, agricultural mechanics. You want people to talk about themselves. An effective officer can get points on the FFA across at appropriate times in the conversation.

b. Other topics might be: Showing livestock, judging, Foundation Award program. Special awards, or achievements. Why he belongs to FFA. Offices held and what he did. His future plans. His opinion of meeting, convention or banquet you are attending. His opinion of future of agriculture. His State Convention or District leadership experiences.

2. With Adults:

a. Discuss or ask about the following: Who the person is or where he lives. His family. His occupation - how he got into it.

b. If he has travelled, where and interesting experiences, (you might explain the FFA Educational Exchange program). His hobbies, special interests, music, sports, entertainment. His interest in FFA? Why? His attendance at State or National Convention. His opinions of teenagers today. Your involvement in meeting, Good Will tour, Convention, duties of National Officer's. His opinion of agriculture's future. His college, civic interests.

c. To ladies, (1) Clothing, (every woman appreciates a compliment. So does a man if he is wearing a nice looking suit or a "different"tie.) (2) What are her favorite dishes, her hobbies, travel experiences or family.

3. With Teenager: (General)

   a. Talk about--School or college. Summer work, vacation. Plans for future. Favorite hobbies, sports, food, entertainment, songs. Family, farm, city, or favorite place. Most outstanding awards or achievements. FFA in their school.

I. Self Analysis (Honestly answer at regular intervals)

1. Am I easily discouraged?
2. Do I apply myself to the problems of each day?
3. Can I make a decision quickly and accurately?
4. Am I loyal to my superiors and associates?
5. Do I try to get the other person's point of view?
6. Do I know where I make my mistakes and do I admit them?
7. Am I neat and clean in my work as well as my personal appearance?
8. Am I looking for opportunities to serve others better?
9. Am I following a systematic plan for improvement and advancement?
10. Can I accept honors and advancements and yet "keep my feet on the ground"?
11. Am I dependable and on time--at all times?
12. Am I playing the game of life honestly and fairly with myself, my fellow FFA members and others with whom I work?

X. LEADERSHIP AND YOU

A. The Importance of Good Leadership

1. Leadership is urgently needed in agriculture, industry, business, government, education, finance and international affairs.

2. The need for competent leadership is on all levels; it should be an important part of your FFA chapter, the State Association and the National Organization activities.

3. You may become a leader -- but you must have the desire, the will power, the urge to excel and most important, be willing to work hard.

4. Leaders are developed, not born, therefore leadership does not depend entirely upon the abilities you have, but on how effectively you use your talents.

5. Four definite steps you must follow to become a good leader are:

a. Study the qualities of recognized good leaders.
b. Study yourself, identify both your own weak and strong points.
c. Develop yourself as a good follower -- discipline and willingness to obey are "musts" in a good leader.
d. Follow a definite plan of self improvement in leadership, using your chapter members, parents and teachers to help you set and accomplish goals that will improve your school, chapter, community, agriculture and welfare of all.

B. A leader may be good or bad, depending on the kind of group he is leading and the kind of person he may be.

1. Many confuse leadership with bossing, this is a mistake, because:

The boss drives men -- the leader guides them

The boss depends on authority -- the leader depends upon good will

The boss creates fear -- the leader develops confidence

The boss assigns tasks -- the leader sets the pace

The boss says "I" -- the leader says "WE"

The boss says "GO" -- the leader says "LET'S GO"

2. The GOOD leader in the FFA:

a. Has broad knowledge of the FFA.
b. Has faith in people and wants to work with them.
c. Shows interest and alertness, has proper attitude, a good countenance, and keeps himself physically fit.
d. Has a good personality, exceptional high morals, honesty and uses good manners, as well as practicing the FFA Code of Ethics.
e. Has poise and confidence, speaks in a clear voice and enunciates words clearly.
f. Is democratic in dealing with FFA members, as well as others.
g. He is a hard worker, cooperative and is fair and impartial.
h. Is patient, optimistic and gives credit for work done.
i. Is sensitive to the individual and recognizes individual differences.
j. Acts as a helper, umpire and moderator so that all are encouraged to share in the work of the FFA.
k. Shows and uses a sense of humor to relieve the tension of a serious meeting.

l. Takes pride in the job he is doing.
m. Realizes that to serve the FFA as a leader, his duty is to let others share responsibilities.
n. Is always well prepared, creative, uses initiative and has vision to help others learn and grow through group activities.
o. Has humility, courtesy, takes advice and does his best at all times.
p. Believes in the FFA organization and has a sincere desire to serve it as a "team member" in accomplishing the purposes of the organization.

XI. LEADERSHIP IN GROUP DISCUSSION

by Wm. Paul Gray

Democracy is both a form of government and also a way of living. Democracy is "a social process in which the group as a whole is self governing...and in which all members of the group are equally represented in making a collaborative decision". If citizens are to be more effective and to function in an organized democratic way they must have leadership opportunities. Leadership should pass around within a group and each member should share in leadership according to his ability. The more mature the group the more this leadership is shared in the group. The dynamism which is present within a group gathered for discussion is essentially a process of circular, interpersonal relations of leader to group, of group to members to each other, and all group members to the leader.

A. What is a leader? Leadership is the ability in a well adjusted person to handle people, to inspire, or influence the actions of others to make decisions or move a group to action. "Leadership is any contribution to the establishment and attainment of group processes." Therefore leadership is a quality of group activity.

1. Formal Leadership is where the leader is appointed or elected. This leadership applies to organizations such as the Future Farmers of America or teachers associations. The duties and authority of formal leadership are usually stated in the organization constitution.

2. Informal Leadership is where the leadership is bestowed upon a person by his fellowmen because of the respect they have for him as a person, his ability and his willingness to accept responsibility. This leadership functions in organizations that have freedom of action, thus the driving force comes through group action.

B. What are the Qualities of Leadership? A good leader must have certain qualities which can be learned by the average person if he works on them intelligently. The qualities are also highly desirable in everyday life.

1. A leader believes in and understands the principles of democracy. He believes the discussion group has the ability and right to make decisions and to select their own leader. He further believes the group's decisions will be sounder and more readily accepted than where decisions are imposed upon the group.

2. A leader respects the rights and dignity of others. He realizes that every person can make worthy contributions to society, if given the chance. He believes every person is equal in respect to having the same right to live fully in a democratic society.

3. A leader is willing to accept responsibility and do his part through work within the group.

4. A leader is able to work and get along with people in a friendly and peaceful manner. He must be straight forward, agreeable and industrious. the leader praises where praise is due, and he has sensitivity to the basic trends and moods of the group.

5. A leader is able to communicate his thoughts and feelings in a clear and understandable manner as well as verbalize the ideas of the group.

6. A leader is well informed on matters which concern the group. He arrives at a decision only after he has had an opportunity to secure and study pertinent information.

7. A leader is confident in himself, he possesses integrity and also shows trust for his fellow group members.

8. A leader is optimistic and enthusiastic; he believes that group action can overcome obstacles and solve problems. He works within the group with "zest" and enjoyment.

9. A leader is open-minded. He does not claim to have all the answers; he seeks the opinions of the group and accepts and supports them if they seem best for the group. However, he is willing to compromise on issues.

10. A leader has strength of conviction. He will "take a stand" and be counted, yet he can be convinced otherwise if evidence is presented that leads him to know he is in the wrong.

11. A leader will show initiative in getting the group started through sound and careful planning. He proceeds with the group discussion with knowledge rather than with reckless abandon.

12. A leader is public spirited, thus he will not help one individual achieve a selfish end. The leader will desire and work for those things that benefit the group.

13. The leader will restrain his own desires for self expression, but when he does express facts or offer possible solutions he should never make a statement which may commit him to partisanship.

C. Styles of Conference Leadership

Authoritarian Leader (Autocratic)	Strict Supervisory Leader	Democratic or Cooperative Leader	Non Directive Leader	Leader-less Group (Anarchy)

Absolute control ______________________________ Complete Freedom

1. Authoritarianism is a social process where the making of decisions is placed in the hands of one man who is presumed to know better than the others what the group should believe or do. Therefore the autocratic leader in conference discussion dictates both the way a conference shall be conducted and the decisions that are reached; he refuses to share in leadership because of fear of losing power. The autocrate believes the end justifies the means, thus he is not interested in people as an end, but as a means to an end, and is concerned with systems, not people.

In conference procedure the autocratic leader determines the policies and dictates the steps in procedure. He thinks it is his right to assign work patterns for the group, he is a conformist and is extremely status conscious, and he insists his ideas are always correct. The group builds up a resentment reaction, yet they fear to be non-conformists. The decisions reached are not those of the group, nor for the benefit of the group.

2. The Strict Supervisory Leadership is a "dangerous" type of leadership because of its friendlier and milder approach from the autocratic leadership style. The leader generally does not seek personal gain, but he does strongly believe in personal responsibility for the leader. The strict leader through his superior attitude, throttles creativeness, initiative and interdependence of group members.

The conference technique is based upon the assumption that talk is a waste of time. The leader becomes a lecturer, strongly emphasizing his own conclusions and opinions, and he summarizes quite frequently. The group members are spectators, not participants.

3. Democratic or Cooperative Leadership functions on the assumption that all participants show initiative, are creative and use their imagination, thus the leader is influenced, not the participants. The leader is interested in every participant as an individual and also he assists each group member to satisfy himself through co-equality "teamwork".

The Democratic conference technique requires the leader to be personally acceptable to the group; he must promote cooperation and cohesiveness and assist the members to reach sound decisions through intra-group communication. The democratic process is a slow process, but again it may be emphasized that everyone helps make the decisions and knows why decisions are made. The dynamics of the group process is greatest here.

4. Non-Directive Leadership is often called a "benevolent" type because the leader assumes non-procedural duties and the group may achieve their end through a subtle or indirect manner on the part of the leader. His main duty is to really set the "climate" for group discussions, and he does this through patience and friendliness. This fellow advises very little, offers no judgment and generally trades benevolence for loyalty. Group members know him as a "swell guy". This type of technique is dangerous because the group often thinks they are being democratic. Production is sometimes high, but when the group "sees through the leader", they lose interest.

5. The Leader-less Group fails to agree upon the rights and responsibilities of one another. It is a situation of "anything goes" and it generally does through "blockers" and everyone for himself. The ultimate end is chaos, confusion and disorder, with no decisions and no progress made by the group.

Three basic goals should be set when a group leader assumes his duty.

a. The purposes of the discussion should be achieved.....
b. The group members should have respect for the leader as a person, have confidence in him and his ability.....
c. The group members should obtain satisfaction with their experiences in the group discussion.

D. What are the Functions of Leadership? The essentials of democratic leadership are stimulation, guidance, and integration.

Stimulation for developing an awareness of problems and opportunities for growth and progress; guidance for deploying the resources of the group; integration for consolidating gains as a basis for understanding and action. The democratic leader derives his authority from the group and exercises it at the groups discretion. He exceeds his authority when stimulation becomes agitation, guidance becomes domination and integration becomes dictation; his commission is helping others to do their best under their own power.

1. The leader fosters general participation by developing in the group a feeling of belonging and an understanding that discussion is a cooperative activity, and that responsibility should be shared by all.

2. The leader promotes group cohesiveness or desire of every member to be identified with the group. Unity is effected by both the group and the leader.

- a. Whenever possible, assemble conference groups that contain a minimum amount of personal hostility.
- b. Serve as a compromiser of differences between people who are unfriendly.
- c. Allow equal opportunities to participate to all members of the conference group.
- d. Use a seating arrangement that will separate potentially hostile members.
- e. Secure identification of individuals with the group - keep discussion geared to the group problem or goals, allow no personal problems to be considered.
- f. Allow time for a warm up, social session before beginning.
- g. Whenever possible, secure conference members of equal status.
- h. Encourage an attitude of openmindedness, freedom to participate, and general group permissiveness.
- i. Play up the group's goals - this is very important and should result in the members identifying their own goals with the group goals.
- j. Keep the group relatively small.
- k. Whenever possible, avoid changing the personnel of the group.

3. The leader obtains essential information by directing the discussion to areas from whence pertinent information or evidence is presented in an orderly and understandable manner for the group to use. He is cognizant of when sufficient information or facts have been presented with which to begin and facilitate discussion.

4. The leader encourages opinions or solution-giving by the group members, and to get full participation in problem solving.

5. The leader stimulates critical thinking and evaluation by using a planned preparation, determines group goals and then helps the group follow through in accepted steps of reflective thinking.

6. The leader checks all contributions or suggestions that seem irrelevant. He uses courtesy and tact in citing or checking statements. The leader uses fairness and patience, and he does not make split-second decisions which might be incorrect.

7. The leader clarifies the language or word meaning when necessary for group clarity.

8. The leader encourages differences as well as agreement on opinions. Often polite disagreements are healthy for group discussion and maturity.

9. The leader is personally neutral; however, this does not mean he cannot state facts, evidence or offer possible solutions as long as any statements made do not commit him to partisanship.

10. The leader attempts to change the behavior of "troublesome participants". There is always the possibility of a few " 'off' and self centered individuals" causing trouble in discussion. Even though these persons are generally small in number, their hindrance to group unity and goal attainment can be great. If the leader knows the characteristics of these "blockers" he can often manipulate them for the benefit of the group.

11. The leader charts or summarizes the progress of the group discussion through using a blackboard or making oral statements.

E. The Group and Discussion. The progress of organizing the group, creating the framework of ideas and group goals together with good human relationships gives the group its pattern of operation. "Groups exist solely to satisfy the learning desire of people, or because a group of people desire action or productivity". Persons will continue to belong to a group as long as their needs are satisfied. This belongingness and feeling of acceptance in the group can only be developed by the members working, thinking and feeling together - but always, the organization is a flexible pattern, a persistent but ever changing configuration, an active, dynamic togetherness for the benefit of the group. And in this group process the designated leader serves as the catalyst, the enzyme, and the instigator of the dynamism of group discussion.

Reference has been made to a mature group as a self-directing, self controlling body in which every member carries out the responsibilities in a very cooperative manner with good quality of participation, excellent skill and with understanding of group relationships and intelligent management of its environment. This latter is especially important for Group Unity.

1. Group Unity or cohesiveness is necessary for helping the group reach their goals. This is often difficult because of the differences in maturity, interest and

attitudes of the group members. Where the spirit of group integration exists, cooperative effort in working toward a common goal takes place. This naturally results in greater group satisfaction. The integrated group is more easily motivated and will engage in freer participation of communication. However, there are several important factors influencing the group unity and individual performance.

a. Attitudes of members in group toward each other and the group goals.
b. Personal liking for the other individuals in the group.
c. Involvement with the group...each member must become involved with the group goals and purposes.
d. Previous acquaintance with other group members.
e. Equality of status.
f. Receptiveness by other members of the group.

2. The leader and the group as a whole may have Group Barriers. Any one or a combination of these barriers will result in group failure. These are:

a. Negative attitude.
b. Unwillingness to cooperate.
c. Lack of consideration for others.
d. Excessive formality.
e. Excessive control.
f. Lack of clearly defined group goals.
g. Lack of group discipline.

3. Steps in Discussion can be compared to the standardization of the assembly line in auto manufacturing where definite steps and processes increase efficiency of production. Discussion, to be effective, should follow rather general patterns or techniques. However, the leader should avoid extreme forms of disorganization; neither should he follow a "straight jacket" agenda in leading a discussion. The interest, ability and knowledge of the subject by the group members should be considered by the group leader when he plans the conference. It is quite important that the leader be aware of his duty in creating the right atmosphere through proper setting of the correct time and place for the conference.

a. The leader should never

    1. Begin the discussion with a lecture.
    2. Start with the statement, "Well, there isn't much we can do about the problem".
    3. Make opening remarks too long, unclear, uninteresting or fail to indicate the pertinence of the problem.
    4. He should never fail to impress the group of the importance of their cooperation and responsibility in decision making.

b. The leader may choose to open the group discussion by

   1. Making a statement of the major issues.
   2. Using a contrast to the problem.
   3. Pointing out the urgency of the problem.
   4. Using a quotation.
   5. Using a true life portrayal.
   6. Use of role playing or visual aids (effective for specific types of conference openings).

c. If at any time during the democratic discussion the leader becomes cognizant that the group progress is becoming retarded or "blocked", he can

   1. Effectively meet the situation (blocker) as it arises.
   2. He can suggest a short intermission period.
   3. Postpone the meeting to a later time.

d. The final duty of the leader is to bring the discussion to a satisfactory close by a summary that is brief, fair and to the point. He may do this by

   1. Summarizing the main agreements or differences.
   2. Summarizing the main issues or points.
   3. Giving a progress report.
   4. Giving a statement of the decision reached by the group.
   5. Stating the decision and the outline of the group plan of action.

e. Often group members will work diligently, yet feel discouraged that they have not solved all their problems. A good discussion leader will remind the group that many of the misunderstandings and some of man's most burdensome conflicts could be solved, or eliminated, if other groups would accomplish as much through cooperative thinking and exercising group leadership responsibilities.

F. Responsibility Of Each Member Of A Committee

1. Participate at every opportunity in the "role" of an effective member.

2. Feel responsible for the progress of the group toward a workable solution.

3. Follow good thinking habits.

4. Speak loud enough for all to hear.

5. Be willing for others to disagree with issues you raise.

6. Be willing to drop an argument for the sake of moving ahead with the "bigger" issues.

7. Help others to make their point clear and to bring into the discussion valuable experience they have had.

8. Be an alert listener while awaiting your turn to contribute.

9. Assume an attitude of conversation - just talk it out with the others.

10. Help the leader to settle arguments, keep discussion on the track, and get others to contribute.

11. Become more skillful as a group member - look at yourself and make better what you see.

12. Help reduce the "load" on the group leader by taking the lead when you see a chance to help out.

G. Responsibilities Of The Recorder

1. Keep a written record of important issues during this discussion.

2. Bring these written issues before the group of recorders.

3. Aid the committee of recorders to draft summary statements.

4. Aid in the presentation of these summary statements at the final meeting.

5. Aid the workshop group in the formation of "take home" material.

6. Report the progress that has been made by the group at intervals during the discussion period.

7. See that end-of-session reports are on file with the workshop secretary.

H. Kinds Of Members Often Found In Committees

(Members Who Assume TASK Roles)

1. INITIATOR - Suggests or proposes new ideas or a changed way of regarding the group problem or goal, proposes alternate solutions, is an idea man.

2. OPINION SEEKER - Asks for value judgment, feeling, sentiment, thought, attitude, interpretation, "How does it seem to you, how do you feel, etc?"

3. OPINION GIVER - Makes a value judgment, expresses a thought, attitude, makes an interpretation, diagnosis. "It seems to me, I think, I feel, etc.".

4. INFORMATION SEEKER - Asks for clarification in terms of facts, evidence, examples, experience, pertinent to the problem at hand.

5. INFORMATION GIVER - Gives facts or generalizations which are "authoritative". Cite evidence, examples, experiences, pertinent to the problem at hand.

6. ELABORATOR - Spells out suggestions, offers a rationale for suggestions made and tries to deduce how an idea or suggestion would work if adopted.

7. EVALUATOR CRITIC - Questions the "practicality", the "logic", the "facts" or the "procedure" of a suggestion or of some unit of group discussion.

8. SUMMARIZER - Defines where the group is now in its thinking or acting process. Main threads of development are pulled together to clarify.

9. RECORDER - Writes down suggestions, makes a record of decisions or writes down the product of discussion. "The group memory."

10. INTEGRATOR - Shows or clarifies the relationships among various ideas and suggestions, tries to coordinate activities of various members or sub-groups.

11. ORIENTATOR - Defines the position of the group with respect to its goals or raises questions about the direction which the group thinking is taking.

12. PROCEDURAL TECHNICIAN - Expedites group movement by doing things for the group e.g. distributing materials, rearranging the seats, etc.

(Members Who Assume GROUP BUILDING Roles)

1. ENCOURAGER - Praises, commends, agrees with and accepts the contributions of others. Indicates warmth, solidarity, satisfaction, pleasure and raises status.

2. HARMONIZER - Mediates differences, makes rational attempt to reconcile disagreements, relieves tension in conflict situations, defers "hot" issues.

3. STANDARD SETTER - Expresses standard for the group to attempt to achieve or applies standards in evaluating the quality of group processes.

I. Group Leader Evaluation Of His Performance As Chairman

1. Did I start the meeting with an agenda?
2. Was the purpose of the meeting clearly stated at the beginning?
3. Did I talk to the group, not to any individual?
4. Did the meeting break up into series of private conversations?
5. Did I argue with any speaker?
6. When I had a comment, did I ask another person to preside?
7. Did I speak clearly so everyone heard me?
8. Did members address me no more formally than others in the group?
9. Did members frequently express their real feelings?
10. Did members address their remarks to each other rather than to me?
11. Did members speak up without asking for my permission?
12. Did members depend upon me alone to handle "problem members"?
13. Did the majority of good ideas originate with many members of the group?
14. Did members listen to each other without interrupting?
15. Did members seem to know what goals they were seeking?
16. Did members often accept insights and information from other members?
17. Was there an absence of hostility toward me?
18. Did different individuals frequently lead the group's thinking, discussion and procedure?
19. Did I recommend committee study when discussion indicated the group could not come to an agreement?
20. Did I keep control of the meeting without cutting off discussion?

21. Before closing the meeting, did I check the results to see that nothing was omitted that should be said or done?

22. Was I aware of the physical comfort of all---temperature, lights, drafts, seating, lights, thirst, etc.

23. Am I proud of the group's work and accomplishments under my leadership?

XII. FUNDAMENTALS OF PUBLIC SPEAKING

An effective speaker has a "head to contrive, a tongue to persuade and a hand to execute".

A. The kinds of speeches you might give.

1. To get action.
    - a. Give examples of your experiences, illustrations.
    - b. Be clear cut in what you want the audience to do--tell it forcefully and with conviction.
    - c. Give reason why the action is desired, the benefit to be gained by your audience.
2. To gain confidence.
    - a. Win confidence by deserving it, speak sincerely, be enthusiastic and impart conviction. Your voice, mannerism and showing respect for audience will help.
    - b. Desire to get a "yes" response, find a common ground of agreement.
3. To inform.
    - a. Give explanations, instructions or a report. Restrict your subject to the time you have; cover your points in order, from beginning to conclusion.
    - b. You can often compare the strange with the familiar, but avoid technical terms.
    - c. Don't shoot with bird shot, but with a rifle.
4. To impress.
    - a. To make a lasting impression on your audience through reference to

personal experience. Emotions are appealed to, aided with well chosen descriptive words.

b. Add life, detail, color and appeal so the audience will retain what it is you are telling.

5. To entertain.

    a. To bring enjoyment or pleasure, and does not always necessarily involve humor. It is to bring relaxation and cause the audience to reflect in a happy mood.
    b. Often a speaker can include a "message" along with humor or entertainment.

6. Impromptu speaking.

    a. In "talking off the cuff" the speaker must be mentally ready; practice keeping along with a speaker on the program. What would you say if you were asked to continue, should the speaker stop?
    b. Never apologize if not prepared, but launch into your topic.
    c. Set living example immediately to enlist attention of your audience so you become a part of each other. Speak with animation and force.
    d. Know the audience: Who are they? What are they doing? The occasion: What's the meeting about?
    e. Often you can modify remarks of previous speaker to fit the occasion.
    f. Keep your ideas logically grouped around a central theme.
    g. Impromptu talking is an extension of the same thing one does in the living room.

B. The speech essentials.

1. Becoming aware of the situation:

    a. It is important to be aware of the speaking situation, and its relationship to preparing for the speech, such as, the audience--place--subject--length of speech--lectern--and P.A. system.

2. Preparation:

    a. Select a subject you have earned the right to talk about. Then limit yourself to a specific area.
    b. What audience will you be speaking to? What are the interests of the audience?
    c. What about time to prepare and time to speak?

d. Use stories, illustrations and examples.
e. Humanize: Use human interest stories, such as your own background and experiences.
f. Personalize: Use names, specific information, dates, places--but don't overdo.
g. Use words or phrases that "paint a word picture".

3. Outlining: (In three parts)

   a. Introduction:--To get started, make it personal, or refer to why the speech is given. May use illustrations or comparisons, but this must relate to subject. If humor is used, it must have a definite bearing on the speech.

   b. Discussion:--Contains main ideas you wish to communicate to your audience. Must be well connected and flow smoothly from point to point. Eliminate any ideas or parts that do not have connection with the subject. The speech should be planned so the audience will feel it is important to them.

   c. Conclusion:--Always leave a favorable impression or an idea with your audience. Often a well chosen story, anecdote, poem, quotation, or simple repetition of main parts are good. Avoid using well worn phrases as, "in conclusion", or any other trite little tidbits.

4. Practice--Practice--Practice:

   a. Never memorize a speech. We talk spontaneously, so why not give a speech in a similar manner?

   b. Rehearse in privacy of a room, talk loudly and follow your notes to get sequence of ideas clearly in mind (think ideas, not words).

   c. Practice your speech with friends to get their reactions and responses, as to--How do I look and sound? How is my eye contact? Are my facial expressions, gestures and poise good?

   d. Practice before a mirror to work for physical balance, coordination, smoothness and meaningful gestures.

   e. Use a tape recorder to check your voice volume, pronunciation, enunciation, articulation, inflection and rate of delivery. Play back of tape will help you correct errors and slips in delivery.

5. Developing confidence:

   a. There are many causes of stage fright, such as, uncertainty, ignorance, negative thinking or going into an unknown experience. A certain amount of "stage fright" is necessary for you to be "up" for the speech. But lack of preparation will bother you the most.

   b. One must use positive thinking, don't let worry defeat you. Think of the good result and rewards after you have finished your speech.

   c. Your personal appearance is important. It helps to take a shower, wear proper clothing, keep your shoes shined, fingernails cleaned and hair groomed.

   d. Personal hygiene is a must; get ample rest, eat properly, exercise regularly and maintain good physical habits.

   e. Arrive at the meeting early to avoid anxiety; this will also allow you to study the room setting, the stage arrangement, your place on the program, or to become acquainted with the chairman and other members or guests.

6. The "Waiting" period:

   a. While waiting for your part on the program it is most important to be alert and show interest in what is being said. Appear at ease, show confidence, calmness and assurance on your part.

   b. Be thinking of your opening remarks and occasionally take a few deep breaths.

   c. Avoid slouching, whispering conversations, gum chewing or body actions that will reflect against you or may cause disarray of your clothing.

   d. Know how you will get to the lectern in the most effective way.

7. The Delivery--you are "on":

   a. Be ready when the chairman introduces you. Give the chairman time to get to his chair before recognizing him, but never turn from the microphone to do this.

   b. Handle your notes carefully and properly; make purposeful adjustment of the "mike" and address your audience after salutatory remarks with words that are clear, rich in tone and spoken with confidence.

c. Establish eye contact with your audience; use proper body action, and be aware of how your voice is carrying.

d. Be eager to share your talk with your listeners, transfer this enthusiasm to the audience, using proper animation. If you are honored to speak, say so. Never belittle or make an audience feel inferior. Use humor carefully, and properly. Always watch for audience reaction.

e. Smile and nod to express your appreciation of the plaudits of the audience, then properly return to your seat. Avoid facial expressions or bodily movement that might show your personal reaction to the speech. Continue to show interest in the program.

8. Evaluate yourself for improvement:

a. Review your speech immediately by asking yourself:

1. Where was I inadequate? How can I improve?
2. What did I do incorrectly? Did I hold my audience? Did I talk too long? Too fast? Did my voice carry?
3. What were the good points? What did I do correctly?
4. What were the comments of my listeners?
5. What must be improved to do better next time?

9. Undesirable Types of Speaking Mannerisms:

a. Physically swaying to and fro--teeter-totter.
b. Waving hands like a windmill.
c. Wringing hands.
d. Playing with glasses or key chains, coins in pocket, pencils or the mike.
e. Hiding hands behind the back.
f. Adjusting clothing, tinkering with buttons, tie or handkerchief.
g. Leaning on table or desk or sitting down.
h. Staring out the window or at ceiling.

XIII. IDEAS FOR SPEAKING OCCASIONS

A. Introducing A Speaker

1. Prepare thoroughly what you are going to say.
    - a. Learn the speakers name, his title and importance as a person.
    - b. Learn the exact title of the speech.
    - c. Know why the speaker is qualified to speak on the subject.
    - d. Know why the subject is of special interest to the audience.
2. Don'ts in introducing a speaker.
    - a. Don't make your introduction too long.
    - b. Don't try to capture the audience with your personality, funny stories or with your knowledge of the subject. Remember, he is the speaker.
    - c. Don't give exaggerated praise.
    - d. Don't apologize to the audience if the speaker is a substitute speaker.
3. Do's in introducing a speaker.
    - a. Be enthusiastic and sincere.
    - b. Give the exact title of the speech.
    - c. Bridge the gap between the topic and the interest of the group.
    - d. List the speakers' outstanding qualifications, especially those that relate to the topic.
    - e. Create suspense so that the audience is waiting for the speaker.
    - f. Give his name--CLEARLY AND DISTINCTLY.
    - g. Provoke applause and stay on the platform until the speaker has taken his place.
    - h. Retire during the applause.
    - i. Be alert to "relieve" him after he has spoken.

B. Presenting An Award

1. Tell why the award is made--(explain simply)

2. Tell something of the group interest in the life and activities of the person receiving the award.

3. Explain how much the award is deserved and how the group feels toward the person receiving the award.

4. Congratulate the recipient and convey everyone's good wishes for the future.

C. Accepting An Award

1. Give a warm, sincere "thank you" to the group.
2. Give credit to others who have helped you, your associates, friends and family.
3. Tell what the award (or gift) means to you.
4. If it is wrapped, open and display it.
5. Tell the audience how useful or decorative it is and how you intend to use it.
6. End with another sincere expression of your gratitude.

D. Greetings

1. Bring greetings from the National Organization, your fellow officers and National Staff.
2. Express your appreciation for being invited.
3. Let the audience know that you are familiar with some of the good work the State or group is doing. Mention some of the outstanding achievements of members of the group.
4. Challenge the group on the task for which it is assembled.
5. Emphasize your desire to meet as many of the members and advisors as possible while attending the convention or meeting.
6. Be friendly, enthusiastic, confident (not cocky), well poised and . . . . SMILE!
7. Limit your remarks to between 3 to 5 minutes.

E. Chapter Banquet

1. Have your talk well prepared in advance.
2. Learn as much as possible about the chapter before your visit.
3. Bring greetings from the National Organization.
4. Express your appreciation for being invited.

5. Commend the audience on some of the good work the chapter and also the State Association are doing.

6. Give proper recognition to the parents, especially the importance of their cooperation and sacrifice. Emphasize the purposes of the Parent-Son banquet as well as how a good FFA program becomes the "showwindow" of the vocational agriculture program.

7. Express appreciation to the school administrators, members of the school board and teachers for their part in helping the members build a strong chapter.

8. Recognize and congratulate award winners.

9. Inspire members to take advantage of FFA for:

   a. Self improvement, development of leadership, improved scholarship, cooperation, and responsible citizenship.
   b. Home improvement, better farming programs and increased interest of boys in agricultural careers.
   c. Community and school improvement and activities to improve the welfare of all.

10. Use FFA stories, inspiring thoughts and appropriate anecdotes.

11. Don't talk too long; you will be better remembered for a brief, to the point inspiring message. Remember, banquet programs have a tendency to last too long, anyway.

12. Speak on the level of the audience. Always avoid "going over your head" and never philosophize.

13. Use notes if necessary, but NEVER read a speech.

14. Speak a word of appreciation for the organization or group that served the banquet.

15. Be yourself, confident, enthusiastic, well poised and. . . . . SMILE.

F. Chapter Visit

1. Find out as much as possible about the chapter before your visit.

2. Bring greetings, express appreciation for the opportunity to visit.

3. Commend the chapter on some of its good work or accomplishments.

4. Relate what happened to you when an officer made a visit to your chapter, especially, how he inspired you to set higher goals, work harder, cooperate with others, follow advice of teachers and improve yourself.

5. Judge the length of your talk on the occasion. Ordinarily a 6 to 8 minute talk, well thought out in advance and presented effectively will serve the purpose.

6. Don't fail to use good FFA stories.

G. Service Club

1. Be aware of the Service Club motto and if possible some of the activities and achievements of the club.

2. Be familiar with the many activities in which the FFA and different Service Clubs jointly participate, then emphasize where appropriate.

3. Often the club is assisting FFA members by providing work experience, chain livestock programs, or other enterprises.

4. Emphasize what is the FFA, its history, why it was organized, how it is financed, who may belong, degrees and some of the educational opportunities offered to its members.

5. Service is one of the FFA foundation stones, tell how the FFA provides opportunities for development of future responsible citizens.

6. What becomes of some of the members as a result of FFA membership.

H. Teacher Or Supervisor Conference

1. Emphasis should be placed upon some of the following:

    a. Importance of the vocational agriculture teacher, especially his influence on the members, as he works in cooperation with parents and school administrators.

    b. The advisor's role in the proper relationship of vocational agriculture and FFA--and its place in the school curriculum.

c. What the FFA has meant to you as a member and officer.

d. What you have been doing as an officer, such as, Good Will tour, leadership training, State conventions, speaking, etc.

e. The vocational agriculture department often "bridges the gap" between the school and community by making the FFA the "showwindow" of vocational agriculture, tell how the teacher, State Staff and members accomplish this.

I. Miscellaneous Speech Topics

Many officers have prepared brief (5 to 6 minutes) talks on one or more of the following topics:

1. The FFA Motto; The Meaning of the Creed; The Primary Aim of FFA; Why Do I Belong to the FFA? The Eight Essentials of Chapter Operation; The Meaning of Leadership; Opportunities for Students in Vocational Agriculture; What the FFA Has Meant to Me; The FFA Triangle; What it Takes to be an FFA Officer--or an Award Winner--or The Place of FFA in Vocational Agriculture.

J. Orientation of Newly Elected Officers

It is the State Association's responsibility to give leadership training to its State Officers, not yours. However, should you be asked to talk to newly elected officers, or assist with leadership training, suggested ideas are:

1. Congratulate officers, and you appreciate opportunity to meet with them.
2. Find out who inspired each officer, "tie" this to their responsibility of inspiring other members.
3. Emphasize honor of office, but with it comes responsibilities.
4. Officers should know selected parts of manual, ceremonies, rituals, essentials of a good chapter, parliamentary procedure and State program activities. (Impress upon officers why these things are important from your experiences as a past State Officer.)
5. How to go about accomplishing goals in self improvement; the importance of their work and how accomplished.
6. Know and live the code of ethics, know and practice good etiquette.

7. Budgeting of time.

8. Maintaining proper relationships with family and FFA members.

9. "Highlights" of the National Organization; new ideas, plans, Future Farmers Supply Service, The National Future Farmer, Foundation, etc.

10. Importance of cooperation and work with State Staff members.

11. Self evaluation, importance and some means of evaluation.

12. Leave officers with a challenge.

Printed by The National FUTURE FARMER, 1967

VT 006 282
Vocational Agriculture and the FFA.

Future Farmers of America, Washington, D.C.
Office of Education (DHEW), Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 67 20p.

*VOCATIONAL AGRICULTURE; *STUDENT ORGANIZATIONS; *PROGRAM DESCRIPTIONS; ORIENTATION MATERIAL; LEADERSHIP TRAINING
FFA; *FUTURE FARMERS OF AMERICA

Orientation information concerning vocational education in agriculture and the Future Farmers of America (FFA) is included in this student reference. Content contains sections concerning: (1) Vocational education in agriculture, (2) agricultural technology, (3) establishment in an agricultural occupation, (4) the Future Farmers of America, (5) the FFA Foundation, (6) state and local support for FFA, (7) the FFA motto, (8) the FFA creed, (9) the FFA and purposes, (10) the FFA emblem, and (11) the challenge of agriculture. (DM)

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VOCATIONAL AGRICULTURE

FUTURE FARMERS OF AMERICA

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A brief description of the nationwide program of Vocational Education in Agriculture and its accompanying organization, the Future Farmers of America

Vocational Agriculture

and the

FFA

Prepared and published by

FUTURE FARMERS OF AMERICA

in cooperation with the

AGRICULTURAL EDUCATION SERVICE OF THE OFFICE OF EDUCATION
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
WASHINGTON, D. C. 20202

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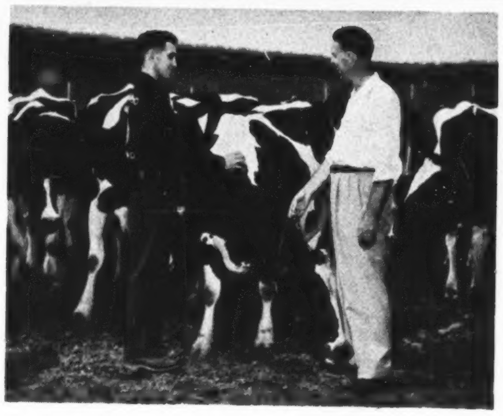
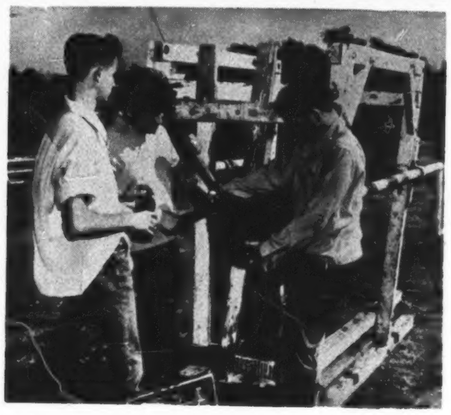
A basic requirement for membership in the FFA is that a boy must be a student of vocational agriculture in high school, although he is permitted to retain his membership for three years following graduation. We invite your attention to the following pages which describe, first, the nationwide program of vocational education in agriculture, and second, the Future Farmers of America organization.



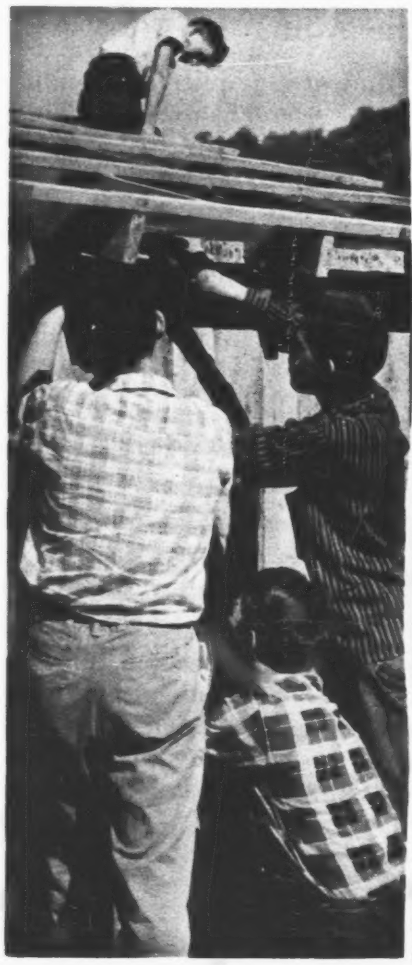


Vocational Education In Agriculture

Vocational education in agriculture is a federally-aided program of systematic instruction in agriculture of less than college grade, conducted in public schools or classes for persons whose occupational objectives require knowledge and skills in agricultural subjects. The program is conducted under a plan of cooperation between local schools, State Boards for Vocational Education, and the Office of Education, U. S. Department of Health, Education, and Welfare.

Instruction is given by teachers who are specially trained agricultural college graduates. Teachers usually are employed on a 12-month basis. The instructional program is designed to fit the needs of the individual student, based on his capabilities and interests, and the needs of the community.

This booklet treats programs offered at the high school level. It should be pointed out, however, that many schools also offer special vocational agriculture instruction for young and adult farmers and, in some cases, for non-farm agriculturists who wish to improve their proficiency or learn new skills.



Students of Farm Technology

Vocational agriculture students are taught the techniques and science of agricultural production. They receive training in marketing and other phases of farm management, especially in the importance of maintaining complete and accurate records on business enterprises. Soil conservation and improvement is studied. Considerable attention is given to farm mechanics training involving the selection, care, maintenance and operation of modern farm machinery. Instruction also is provided in the construction and maintenance of farm buildings, fences, and other equipment.

In the first two years, particularly, much emphasis is given to the study of career opportunities in agriculture.

The teacher frequently takes his vocational agriculture students on field trips to neighboring farms to observe good management practices; to agricultural experiment stations where they may see the development and results of new practices; to nearby agricultural business firms, and to other places where they may gain new agricultural knowledge through observation and experience.

Establishment the Aim

In addition to his study in school each student is required to conduct a "supervised agricultural experience program" where he puts into actual practice the knowledge gained in the classroom. "Doing to Learn" is an important part of this educational program. The teacher makes frequent visits to the boy's home farm or to the site of his occupational experience employment, supervising and helping with the development of his program. The aim is to help the student advance as far in his agricultural occupation as his abilities and interests will permit. Individual instruction and counseling has an important place in vocational agricultural education.

Boys who plan to farm are encouraged to build their enterprises toward establishment in full-time farming as early as possible, either on their own or in a formal partnership agreement with their parents.

Many schools provide school farms, greenhouses, and other such facilities for the use of students who do not live on the farm. Some students get their experience through "placement" whereby they work with successful farmers during a part of the year.

About one-third of vocational agriculture students become full-time farmers, farm operators, or hired farm workers. Most others find good careers in some other phase of agriculture. Their experience in vocational agriculture and the FFA serve well to help them to success. Many continue their studies through post high school technical training or in agricultural college.

The Future Farmers Of America

The Future Farmers of America is the national organization, of, by, and for students of vocational agriculture in public secondary schools which operate under the provisions of the National Vocational Education Acts. It is an educational, non-profit, non-political farm youth organization of voluntary membership, designed to develop agricultural leadership, character, thrift, scholarship, cooperation, citizenship, and patriotism. FFA is an integral part of the instructional program . . . a *teaching tool.* Students must be enrolled in vocational agriculture to become eligible for membership. They may retain their membership for three years following their graduation from high school, or until they are 21 years of age, whichever length of time is greater.

The FFA is sponsored by the Agricultural Service of the Vocational and Technical Education Division, Office of Education, U. S. Department of Health, Education, and Welfare, in cooperation with the various State Boards for Vocational Education and local high school departments of vocational agriculture. The Head of the Agricultural Education Service serves as National FFA Advisor, and a member of his staff serves as National FFA Executive Secretary. The State Advisor for each State Association of the FFA is the State Supervisor of Vocational Agriculture, and the Advisor of each local chapter is the high school teacher of vocational agriculture.

Organized in 1928

The national FFA organization was launched at Kansas City, Missouri, in November, 1928, following many years of development of vocational agriculture student organizations in the States and local communities. Originally incorporated under the laws of the State of Virginia, the FFA was granted a charter of incorporation by Act of Congress in 1950 *(Public Law 740, 81st Congress).*

The FFA has approximately 450,000 active members in 9,000 local high school chapters located in farming areas throughout the 50 States and Puerto Rico. Similar organizations have been established in Japan, the Philippines, and other countries.

Learn by Doing

Through participating experiences in the Future Farmers of America, members learn how to take part in meetings, to follow parliamentary procedure, to speak in public, and to cooperate with their fellow students in programs for individual and community betterment. Local chapters sponsor recreational activities, organize educational tours, conduct safety and home improvement campaigns, and hold parent-son banquets. They have been known to organize a local chamber of commerce where none existed, and to organize and manage a community fair. They frequently take on such jobs as the landscaping and beautification of school and church grounds in the community.

Many FFA activities are designed to stimulate the boys to do better work in vocational agriculture. The advancement through degrees in the organization is based largely on achievement in agriculture. Awards offered through the FFA Foundation stimulate increased effort by the students. Included among these are awards for outstanding achievement in crop farming, dairy farming, farm and home electrification, forestry, home improvement, livestock farming, ornamental horticulture, poultry farming, agricultural mechanics, and soil and water management. A national chapter award program recognizes local chapters that have outstanding programs of activities. Awards also are provided for farm safety promotion by chapters, and for public speaking.

Chapters operate "pig chains" to help members get started; pool their funds to make quantity purchases of seeds, fertilizers, and other supplies. Judging contests build interest in learning the points of livestock and poultry selection; fairs and livestock shows build up enthusiasm for raising top quality products. Many chapters own one or more high quality sires for use of members and others of the community in improving the quality of their livestock. FFA members are active in dairy herd improvement associations, livestock breeders' associations, crop improvement associations and other similar organizations working for improved agriculture.

Leadership from Boys

Under the National FFA Charter, a Board of Officers of six members is elected each year by the national convention delegates. They include the president, secretary, and four vice presidents, one to represent each of the organization's four administrative regions. In addition, there is an adult Board of Directors composed of five members of the Agricultural Education Service, U. S. Office of Education, and four State Supervisors of Agricultural Education who are elected by their fellow State Supervisors in regional conferences. The two Boards meet three times annually, twice in Washington, D. C., and once in Kansas City, Missouri.

In practice, the young officers usually meet two or three days before the Board of Directors to prepare recommendations to the adult board. They then join the adult board and participate in discussions and, where new business arises, submit new recommendations. Questions on policy frequently are referred to the delegate body in national convention. Although the FFA Constitution gives the adult Board of Directors final authority action taken usually represents the recommendations of the boy members. Essentially, business of the organization may be said to be "run by the boys" under adult guidance.

Each State Association, and each Local Chapter, elects officers annually. Official ceremonies and parliamentary procedure are used in the conduct of meetings, providing an air of dignity and at the same time giving the boys experience that they will need later as they participate in adult organizations. Local chapters depend heavily upon committees of the membership to develop programs and see that they are carried out; thus, many members have opportunities to participate in leadership roles.

Financing the FFA

The Future Farmers of America finances its activities through membership dues and a wide variety of other means.

Local chapters use many methods for raising funds, in addition to dues. Concessions at sports events, selling calendars and magazine subscriptions, or raising and selling farm products are typical of money raising activities. Many chapters budget $1,000 or more for activities each year.

State Associations depend mostly upon annual dues paid by members for financing State FFA activities.

The National Organization budgets about $100,000 annually for the national convention, travel of officers, printing, public relations, and other national activities. National dues are 50 cents per member. In addition to dues, the FFA has income from the Future Farmers Supply Service which sells FFA jackets, jewelry, and other official merchandise to members, and from a calendar which is published by the FFA and sold by local chapters. The organization also publishes the National Future Farmer Magazine, a bi-monthly publication going to all the members which is largely self-supporting through advertising.

The National Convention

Each year in October, ten thousand or more blue-jacketed members of the Future Farmers of America converge on the Municipal Auditorium in Kansas City, Mo., for the annual National FFA Convention.

The convention is the culmination point for many activities that are begun in local chapters. It is a time when regional and national awards are presented to boys whose achievements in farming and leadership have been outstanding. The finals of the national FFA public speaking contest are held. Official delegates discuss and solve organizational problems, and new national officers are elected. A 100-piece band and a 75-voice chorus made up of Future Farmers from all sections of the country provide music. Inspirational speakers, pageantry, and entertainment features round out the program to provide an interesting and stimulative experience for the thousands of boys who attend.

The convention is scheduled in conjunction with the American Royal Live Stock and Horse Show, in order that many of the FFA visitors may see the Royal while they are in Kansas City.

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VIRGINIA
VIRGINIA
VIRGINIA
VERMONT
TEXAS
PENNSYLVANIA

The FFA Foundation

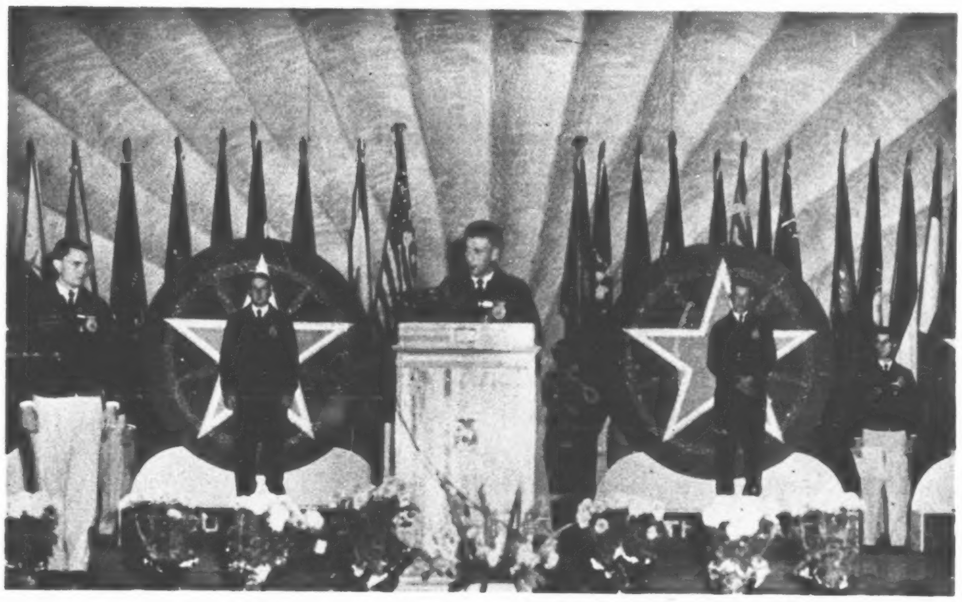
Through the Future Farmers of America Foundation, Inc., business, industry, farm organizations, and others give wholehearted support to vocational agriculture and the FFA. The Foundation budgets about $220,000 each year for FFA awards. It is supported by annual cash contributions from more than 450 donors.

The donors give their funds "without strings attached" and the Foundation program is administered by a Board of Trustees composed entirely of men who are active in the vocational agriculture program. (Nine representatives from the States and six representing the Agricultural Education Service of the U. S. Office of Education.)

The Foundation sponsors a wide variety of awards for FFA members. Best known of these is the Star Farmer of America award given annually at the national FFA convention to the boy who, in the judges' opinion, has accomplished the most in farming, leadership, cooperation, and citizenship. The winner receives a Foundation check for $1,000. Three others are named Regional Star Farmers and receive $500 each.

All FFA Foundation awards are designed specifically to stimulate the interest of the boys in their study and work. National awards are presented at the annual national FFA convention. State awards usually are presented during State FFA Conventions. Local chapter awards (medals) usually are presented at the time of the chapter's annual "parent-son" banquet, or in a special school assembly program.

More than 70,000 FFA Foundation medals are awarded locally each year.



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State and Local Support

In addition to the program of awards for FFA members sponsored by the national FFA Foundation, many business concerns and individuals give support to FFA on a State or local basis. This support may be in the form of prizes and awards to outstanding members, cash donations for worthy FFA activities, loan or gift of farm tools and equipment, or, at both the State and national level, the provision of movies, filmstrips, booklets, and other educational materials.

Many schools have advisory committees composed of local citizens who advise and assist in planning the vocational agriculture and FFA program.

The FFA Motto

"Learning to do,
Doing to learn;
Earning to live,
Living to serve."

Learning To Do . . . (As vocational agriculture students in high school, Future Farmers study the economic and scientific principles of agriculture and learn skills needed on the farm or in other agricultural occupations.)

Doing To Learn . . . (Each member is required to conduct a farming program at home or on another farm, or an agricultural work experience program, under the supervision of his vocational agriculture instructor. The student thus gets practical experience to supplement his study.)

Earning To Live . . . (The supervised farming program or the work experience program is designed to provide income so that the Future Farmer may expand his farming enterprises as he learns, or save toward further education, to the end that he will be successfully established and become a self-supporting, substantial citizen.)

Living To Serve . . . (Development of competent, aggressive rural leadership and citizenship is a primary aim of the FFA. Practical experiences in parliamentary procedure, committee work, and conducting business of an organization are provided through regular chapter meetings. Cooperation with other groups, and the assumption of community responsibilities are taught through community service activities.)

The FFA Creed

I believe in the future of farming, with a faith born not of words but of deeds—achievements won by the present and past generations of agriculturists; in the promise of better days through better ways, even as the better things we now enjoy have come to us from the struggles of former years.

I believe that to live and work on a good farm, or to be engaged in other agricultural pursuit, is pleasant as well as challenging; for I know the joys and discomforts of agricultural life and hold an inborn fondness for those associations which, even in hours of discouragement, I cannot deny.

I believe in leadership from ourselves and respect from others. I believe in my own ability to work efficiently and think clearly, with such knowledge and skill as I can secure, and in the ability of progressive agriculture to serve our own and the public interest in producing and marketing the product of our toil.

I believe in less dependence on begging and more power in bargaining; in the life abundant and enough honest wealth to help make it so—for others as well as myself; in less need for charity and more of it when needed; in being happy myself and playing square with those whose happiness depends upon me.

I believe that rural America can and will hold true to the best traditions of our national life and that I can exert an influence in my home and community which will stand solid for my part in that inspiring task.

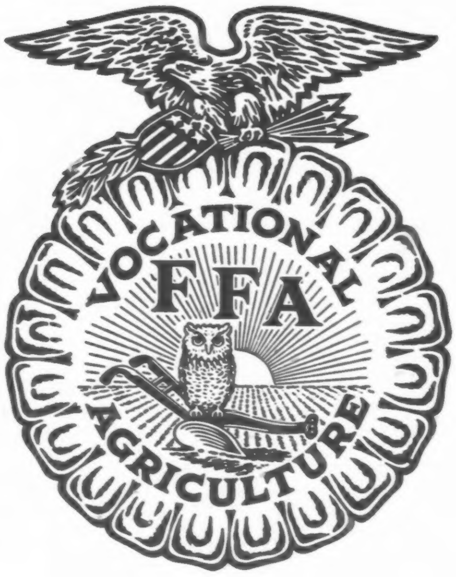
(The Creed was written by E. M. Tiffany, and adopted at the 3rd National Convention of FFA. Revised at the 38th Convention.)

Aim And Purposes Of The FFA

The primary aim of the Future Farmers of America is the development of agricultural leadership, cooperation and citizenship. The specific purposes for which this organization was formed are as follows:

1. *To develop competent, aggressive, rural and agricultural leadership.*
2. *To create and nurture a love of country life.*
3. *To strengthen the confidence of farm boys and young men in themselves and their work.*
4. *To create more interest in the intelligent choice of farming occupations.*
5. *To encourage members in the development of individual farming programs and establishment in farming.*
6. *To encourage members to improve the farm home and its surroundings.*
7. *To participate in worthy undertakings for the improvement of agriculture.*
8. *To develop character, train for useful citizenship, and foster patriotism.*
9. *To participate in cooperative effort.*
10. *To encourage and practice thrift.*
11. *To encourage improvement in scholarship.*
12. *To provide and encourage the development of organized rural recreational activities.*

The FFA Emblem



The emblem of the Future Farmers of America is made up of five symbols: the owl, the plow, and the rising sun, within the cross section of an ear of corn which is surmounted by the American eagle. Upon the face of the emblem appear also the words "Vocational Agriculture" and the letters "FFA." The owl is symbolic of wisdom and knowledge; the plow is the symbol of labor and tillage of the soil; the rising sun is emblematic of progress; corn represents common agricultural interests since corn is native to America and is grown in every State; and the eagle is indicative of the national scope of the organization. The emblem is protected by copyrights and by Pubic Law 740—81st Congress.

Helping To Meet A Challenge

American farmers are expected to feed a growing population—one that is growing so fast that by 1980 it will top a quarter of a billion in this nation alone.

Within 20 years this country will need 40 percent more food than we are now producing just to meet domestic demands. Above this, world food needs will be fantastic. Agricultural production stands today as America's strongest weapon for peace.

Other industries can and will provide the energy, the equipment, and the supplies that agriculture needs. Agriculture itself, aided by industry, must provide the fourth vital element: the human resources needed to meet this tremendous challenge.

Agriculture's first line of human resources is the farm youth of the nation. Educating them, encouraging them, motivating them to assume dynamic leadership is the basic business of those persons who teach vocational agriculture and give adult leadership to the Future Farmers of America.

Providing these young people with incentives to improve their technical skills — encouraging them as they grow toward responsible adulthood—are the contributions that supporters of the FFA program make in helping to meet this most important challenge of our time.

VOCATIONAL
FFA
AGRICULTURE

VT 006 337
Manley, Fred William
Panel on Two-Year Technical Education Programs in Agriculture and Natural Resources.

MF AVAILABLE IN VT-ERIC SET.
Pub Date - 17Jun68 5p.

*POST SECONDARY EDUCATION; *TECHNICAL EDUCATION; *AGRICULTURAL EDUCATION; *AGRICULTURAL TECHNICIANS; PROGRAM DESCRIPTIONS; *EDUCATIONAL POLICY; NATURAL RESOURCES; EDUCATIONAL TRENDS
*NATIONAL RESEARCH COUNCIL; PANEL ON TWO-YEAR PROGRAMS

The Commission on Education in Agriculture and Natural Resources of the National Research Council established a panel on 2-year post-secondary programs with specific charges to: (1) review the status and trends, (2) identify problems and suggest solutions, and (3) give attention to role, goals, administration, curricular organization, transfer curriculums, faculty, counseling, instructional materials, facilities, equipment, enrollment needs (terminal students), and communications. Sections in this paper include: (1) Progress of the panel, including meetings held and a probable outline for the total report, (2) Agricultural Technician Defined, (3) Brief Summary of Study to Determine Current Status and Trends, containing a listing of the number of institutions, programs, and students enrolled in the five states enrolling 64 percent of the student in agricultural technology, (4) Two-Year Technical Education Curriculum in Agriculture and Natural Resources Defined, and (5) The National Research Council, containing a brief description of its organization and functions. (DM)

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PANEL ON TWO-YEAR TECHNICAL EDUCATION PROGRAMS IN AGRICULTURE AND NATURAL RESOURCES

by

Fred William Manley
State Consultant for Agricultural and Biological Education
Department of Community Colleges
State Board of Education
Raleigh, North Carolina

June 17, 1968

Introduction and Panel Objectives

Early in 1967, the National Research Council, through its Commission on Education in Agriculture and Natural Resources (CEANAR), established a Panel on Two-Year Programs with specific charges (1) to review the status and trends in education in agriculture and natural resources in two-year institutions and in two-year programs in four-year institutions and (2) to identify problems and suggest solutions. Moreover, the following areas should be given attention: (1) role and goals, (2) administration, (3) curricular organization, (4) transfer, (5) curricular and course content, (6) faculty, (7) counseling and advising, (8) instructional materials, facilities (including library) and equipment, (9) enrollment and needs (terminal students), and (10) communications.

At their first meeting in Chicago on May 19-20, 1967, the Panel established as its first priority the study of two-year technical education programs in agriculture and natural resources with two-year college parallel (transfer) programs being a second priority. At this time, the Panel was in agreement that two-year technical education programs and two-year college parallel (transfer) programs had quite different objectives, and this should reflect in differences of curricular design and course content.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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VT006337

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The eight members of the Panel are:

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Mount San Antonio Junior College
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Walnut, California 91788

The administrator and one of the resource persons of the Panel is:

Mr. R. E. Geyer
Executive Secretary, CEANAR
National Research Council
2101 Constitution Avenue
Washington, D. C. 20418

Progress of the Panel

In addition to the first meeting at Chicago on May 19-20, 1967, subsequent meetings have been held at Washington, D. C. on July 6-7, 1967, at Lafayette, Indiana (Purdue University) on October 19-20, 1967, and at Walnut, California (Mt. San Antonio College) on March 21-23, 1968.

At the present time, a total report of the Panel is being prepared (limited to two-year technical programs), and it should be ready for distribution in late 1968 or early 1969. The outline of the report includes these parts: (1) Foreword, (2) Role and Goals, (3) Need for Agricultural and Natural Resource Technicians, (4) Present Status and Trends, (5) Curricular Organization and Content, (6) Recruitment, Counseling, and Placement, and (7) Administration.

Agricultural Technician Defined

At a July 1964 National seminar on "Preparing Agricultural Technicians" held at The Ohio State University at Columbus, the following definition of an agricultural technician was developed:

> An agricultural technician is a worker located between the skilled worker and the professional in the job classification structure, in his work performance, and in his educational attainment. He possesses the skill and ability, working independently or with minimal supervision from a professional, to analyze and interpret information, diagnose problems, make decisions, and make practical applications of theoretical knowledge in performing specific tasks in a specialized field in the production, processing, distribution, or marketing of goods and services in agriculture. He must exercise cognitive skills primarily but also must be able to supervise and perform manipulative skills.

Similar definitions of a forest technician and others categorized in the natural resource area have been published.

In addition, it is important to recognize a whole spectrum of specialized occupational objectives designed to support and assist professional management in agriculture and natural resources. As well as technicians who support professional agricultural and biological scientists and engineers, their occupational equivalent is required in the financial and administrative management section of agricultural and natural resource business, and in the marketing, transporting, and servicing of the products of our farms and natural resources.

Brief Summary of Study to Determine Current Status and Trends

The table below gives the approximate number of institutions, programs, and enrollment for 1966-67 and 1967-68 for the top five states.

State	No. Institutions Offering Programs		Total Number Programs Offered		Number Students Enrolled	
	1966-67	1967-68	1966-67	1967-68	1966-67	1967-68
UNITED STATES	137	181	362	462	10,338	13,665
1. California	32	35	113	133	3,228	3,892
2. New York	8	8	42	45	2,181	2,545
3. North Carolina	12	15	26	35	687	935
4. Illinois	5	12	8	21	393	680
5. Massachusetts	2	2	17	18	575	678

These five states enroll approximately 64% of the total students in the Nation. California, alone, enrolls approximately 28% of the total students.

Two-Year Technical Education Curriculum in Agriculture and Natural Resources Defined

The information given in the table above was based upon the definition as given below:

> A two-year technical education curriculum in agriculture and natural resources is defined as any curriculum which ordinarily requires approximately 64 semester hours (4 semesters of approximately 16 weeks each) or 96 quarter hours (6 quarters of approximately 11 weeks each)--or the equivalent--for completion; the primary purpose of the curriculum is to prepare for occupational entry into a technical or semiprofessional field rather than for transfer credit toward a baccalaureate degree in a four-year college or university; the curriculum prepares for a cluster of closely related occupations located between the professional and trade levels--not for just a single job or one that mainly involves the use of learned skills (a trade); and the technical occupational field is in an area commonly associated with agriculture--including horticulture and forestry.

The National Research Council

The National Research Council is an agency organized in 1916 by the National Academy of Sciences, at the request of President Wilson, to enable the broad community of United States scientists and engineers to associate their efforts with those of the more limited membership of the Academy in service to science and the nation. It now serves both the National Academy of Sciences and the National Academy of Engineering in the discharge of their responsibilities. The members of the National Research Council and the members of its committees, boards, and panels are drawn from governmental, academic, industrial, and other private organizations and institutions throughout the country.

Supported by private and public contributions, grants, and contracts, and with voluntary contributions of time and effort by several thousand of the nation's leading scientists and engineers, the Academies and the National Research Council work to serve the national interest, to foster the sound development of science and engineering, and to promote their effective application for the benefit of society.

VT 006 356
Ruth, Leland H.
An Evaluation of the Farm Labor Supervisors Training Program in California.

MF AVAILABLE IN VT-ERIC SET.
Pub Date - 26Sep66 9p.; Presented to the State Board of Agriculture, September 26, 1966.

*AGRICULTURAL EDUCATION; *COURSE EVALUATION; *SUPERVISORY TRAINING; HUMAN RELATIONS; *CREW LEADERS; FOLLOWUP STUDIES; AGRICULTURAL LABORERS; FARM LABOR PROBLEMS
*FARM LABOR SUPERVISORS TRAINING PROGRAM; CALIFORNIA

In an effort to decrease agricultural worker turnover and to increase productivity, a 20-hour course of instruction in human relations was initiated to train superintendents, field foremen, and crew bosses to: (1) understand and use the principles of good supervision, (2) maintain effective relationships with workers, (3) handle personnel and relationship problems as they occur, (4) instruct new and inexperienced workers in how to perform farm jobs, and (5) analyze jobs to determine time and labor saving short cuts. A total of 37 courses in 27 communities enrolling 550 supervisors and employers were completed over a 2-year period. Key course points were motivating people to work and understanding the basic human needs as they relate to work performance in the orientation of workers to job requirements. An evaluation was conducted to determine answers to the following questions: (1) Was skill in supervising workers increased? (2) Was worker turnover reduced? (3) Was worker productivity increased? (4) Were worker accidents reduced? (5) Do employers and supervisors of foremen who completed the course recommend continuation of the program? (6) What recommendations for improving future courses could be made as the result of the evaluation? Findings generally indicated that personnel completing the course were better foremen, increased worker productivity, and needed future courses. Little effect was indicated on reduction of worker turnover and worker accidents. (DM)

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AN EVALUATION OF THE FARM LABOR SUPERVISORS TRAINING PROGRAM IN CALIFORNIA

Presented to the State Board of Agriculture
September 26, 1966

by
Leland H. Ruth, Special Supervisor
Bureau of Agricultural Education
State Department of Education

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT006356

AN EVALUATION OF THE FARM LABOR SUPERVISORS TRAINING PROGRAM IN CALIFORNIA

Management in most major industries has long recognized the need for training foremen in the techniques of how to work with people and the importance of human relations. The methods to obtain maximum production per worker are well understood and practiced by most industrial firms.

It is safe to say that farmers in general have been too busy improving cultural practices, getting greater yields per acre, and wrestling with the problems of marketing to give labor relations proper consideration. This is an uncharted area for most.

This is the case even though the procurement and retention of a sufficient supply of manpower to harvest high labor requirement crops is currently a major problem.

In anticipation of having experienced braceros replaced by a relatively inexperienced domestic workforce, steps are being taken to improve the relationship between the employer and the employee. The main idea is to decrease worker turnover and to increase worker productivity.

Efforts along this line date back to the Spring of 1964. It was at this time that the idea for a Foreman Training Program was conceived and put into action in the Blythe area. The original course was set up by the Blythe Farm Labor Office with the assistance of the Blythe Growers Association. The course was taught by a local elementary school administrator and repeated later in the El Centro area at the invitation of the Imperial Growers Association.

Word of the success of this experiment spread and subsequent inquiries indicated that there was a need for the establishment of similar programs in other areas of the state. As a result, officials of the State Department of Employment, California Farm Labor Committee, and the Bureau of Agricultural Education met on July 7, 1964 to discuss program possibilities.

The outgrowth of this meeting was a training institute for high school agricultural instructors during the month of August, 1964. S. S. Sutherland, Teacher Trainer for the Bureau of Agricultural Education and Head of the Agricultural Education Department of the University of California, compiled a Foreman Training Manual and developed the training program for these people. All of this was accomplished with financial assistance from grower-labor associations.

The desirability of a training program was by now firmly established. At this point, the Bureau of Agricultural Education was requested by the State Department of Employment and the California Growers' Farm Labor Committee to take on the full responsibility of establishing a program on a pilot basis through the departments of vocational agriculture in the high schools and junior colleges which would provide for courses of instruction aimed at improving the ability of farm foremen to manage and instruct inexperienced agricultural workers.

The Bureau, using funds provided under the National Vocational Education Act, in turn contracted with the University of California's Department of Agricultural Education to coordinate, develop, and evaluate the program.

Mr. Jim Becket, Associate Specialist in Agricultural Education performs these functions and has been working with this program for approximately two years.

During the first year of operation, 24 courses were conducted in 19 communities. Last year 13 courses in 8 communities were completed. This gives a total of 37 courses in 27 communities for the two years of operation, reaching approximately 550 supervisors and/or employers.

The course consists of 20 hours of instruction. The manual contains teaching material and outlines for eight 2½ hour sessions.

Basically, this is a course in how to handle men. It is not a course in cultural practices or how to farm. It is designed to train superintendents, field foremen, and crew bosses to (1) understand and use the principles of good supervision (2) maintain effective relationships with workers (3) handle personnel and relationship problems as they occur (4) instruct new and inexperienced workers in how to perform farm jobs and (5) analyze and break down jobs to determine time and labor saving shortcuts.

The course draws heavily from the fields of education, psychology, and sociology, but it is not presented in the theoretical language of these subjects.

Some of the key points covered during these 20 hours of instruction include: what motivates people to work, the basic human needs (physiological, security, social, ego) as they relate to work performance and the orientation of workers to job requirements.

The entire program is based on the premise that the knack of getting people to perform at maximum capacity is a skill that can be learned by a supervisor or crew foreman.

Good supervision as defined in the Farm Foreman manual means "getting the people you employ to do what you want done, when it should be done and how you want it done, because they want to do it." What more could any employer ask?

During February, March, and April, 1966 following the first year of operation, an evaluation was made of the Farm Labor Supervisors Training Program. This study was supported by funds from the Bureau of Agricultural Education. Dr. David R. McClay, head of the Agricultural Education Department at Pennsylvania State University and visiting professor at the University of California, Davis, was selected to make the evaluation.

The purpose of the evaluation was to secure answers to the following questions:

1. Was skill in supervising workers increased?
2. Was worker turnover reduced?
3. Was worker productivity increased?
4. Were worker accidents reduced?
5. Do employers and supervisors of foremen who completed the course recommend continuation of the program?
6. What recommendations for improving future courses could be made as a result of the evaluation?

The responses of the 25 foremen who had completed a Farm Worker Supervisor Training Course between July, 1964 and July, 1965 are shown in Table 1. Inspection of the table shows that the men were unanimous in believing they were better foremen as a result of the courses and all recommended a continuation of the program. They believed that the courses had helped them in becoming more competent in handling workers under their supervision. This, in their opinion, was reflected in some reduction of worker turnover. Worker productivity was increased, they believed, especially that of new workers, who more rapidly achieved the level of competence of experienced help as a result of teaching techniques the foremen learned in the courses.

A minority of the foremen believed that the workers under their supervision had fewer accidents during the year as a result of their increased skill in promoting safe work habits learned through the courses.

The employers interviewed, with few exceptions, believed their foremen were more competent worker supervisors as a result of having completed the courses. The responses of the 25 employers included in the evaluation are also found in Table 1. This group was almost unanimous in recommending a continuation of the Farm Labor Supervisor Training Program for new foremen and as a refresher course for experienced foremen.

The employers felt the course had little, if any, effect on worker turnover. They were about equally divided in their opinions as to whether or not worker output or productivity had increased as a result of their foremen having completed a course in Farm Labor Supervision. With few exceptions, they felt the course could not claim a reduction in worker accidents.

The responses of all the foremen and the employers interviewed are summarized at the bottom of Table 1. Both foremen and employers in all five communities were, with few exceptions, in agreement that (1) foremen were more competent to perform their jobs as a result of the training obtained in the courses, and (2) that similar courses should be made available in the future. Both foremen and employers had different opinions as to the effect the courses had on (1) reducing worker turnover during the year, (2) increasing worker productivity, and (3) reducing worker accidents. The five centers in which courses had been held also differed on the responses of foremen and employers to these questions. In general, the foremen felt the courses were of greater value in helping them solve many of the problems of handling farm workers than did their employers.

As the result of Dr. McClay's evaluation, and at the request of the State Department of Employment and farm organizations, the Bureau of Agricultural Education is planning to continue to contract with the University for further research and development of this program.

We plan to have our specialist, Mr. Becket, continue to work with vocational agriculture teachers throughout the state to increase their knowledge of the program and solicit their participation in it. This program logically should be a responsibility of the local school district and be carried on under the provisions of the regular Adult Education Program. This is the only way a systematic course of instruction can be offered statewide. All local programs would be coordinated with the interested organizations and agencies in the community.

We intend to cooperate with the University in publishing material to supplement the Teachers Manual for Farm Foreman Training. We feel there is a need for a publication which would be entitled "Guidelines for Labor Management in Agriculture". The material in this publication would include some of the information that is in the teachers manual, plus other selected guidelines for labor management.

We also believe that it would be desirable to develop teaching guides for use by vocational agriculture teachers in their regular classroom work.

We expect to begin the development of an advanced course in labor relations which will include relations with unions and will be designed to familiarize the grower with laws governing such relationships. Top management has expressed a need for this type of training.

Personnel from farm labor offices, grower-labor associations, and the Farm Bureau have been active in the development of this program. We intend to continue to solicit their suggestions and advice in the continued development of this activity.

It is also essential that we continue our field work with growers to make certain that the type of course offered continues to be based upon the needs of the agricultural employers.

California is the leading state in the nation in the payment of farm wages. It is also the most progressive in legislation of benefit to farm workers. The Farm Foreman Training Program is another example of our State's farmers using the positive approach to solve their agricultural labor problems.

Table 1

Comparison of Responses of Employers and Foremen Interviewed Concerning the Value of the Farm Labor Supervisor Training Course in California

Location of Course	Respondent	Response to Questions 1 (Better foreman)			2-3 (Reduction of worker turnover			4-5 (Increase in worker productivity)			6-7 (Reduction of worker accidents)			8 (Recommend future courses)		
		Yes	Don't know	No	Yes	Don't know	No	Yes	Don't know	No	Yes	Don't know	No	Yes	Don't know	No
Yuba College	Foreman	5	0	0	1	3	1	2	2	2	3	1	1	5	0	0
	Employer	4	1	0	0	1	4	2	1	2	0	1	4	5	0	0
College of the Sequoias	Foreman	5	0	0	2	2	1	2	2	1	1	0	4	5	0	0
	Employer	4	0	1	0	1	4	4	1	0	2	1	2	5	0	0
Coalinga College	Foreman	5	0	0	2	1	2	4	1	0	0	2	3	5	0	0
	Employer	5	0	0	1	1	3	3	2	0	0	3	2	5	0	0
Santa Paula High School	Foreman	5	0	0	4	0	1	5	0	0	1	0	4	5	0	0
	Employer	5	0	0	2	1	2	2	2	1	0	1	4	5	0	0
Coachella Valley Farm Center	Foreman	5	0	0	2	2	1	4	1	0	0	1	4	5	0	0
	Employer	3	0	2	0	1	4	1	1	3	1	1	3	3	2	0
Subtotal	Foreman	25	0	0	11	8	6	17	6	2	5	4	16	25	0	0
	Employer	21	1	3	3	5	17	12	7	6	3	7	15	23	2	0
Total		46	1	3	14	13	23	29	13	8	8	11	31	48	2	0

VT 006 448
Price, Ray G., And Others
A Four State Survey of Business Education Programs.

MF AVAILABLE IN VT-ERIC SET.
Pub Date - 18p.

*BUSINESS EDUCATION; *HIGH SCHOOLS; STUDENT ABILITY; *CURRICULUM RESEARCH; STUDENT ENROLLMENT; *SCHOOL SURVEYS; CURRICULUM; PILOT PROJECTS; PROGRAM LENGTH

The purposes of the study were to determine: (1) the business subject offerings, (2) grade level of offerings, (3) length of subjects offered, and (4) ability level of business education students in Iowa, Minnesota, North Dakota, and Wisconsin. The sample included 36 small schools, 18 medium schools and 12 large schools. A total of 1,365 scholastic ability test scores of business students were secured from the schools to determine ability level. Information concerning business course offerings, grade level of subjects offered, and length of subjects offered was obtained by questionnaire. Some of the findings were: (1) The most popular vocational business courses in terms of the percentage of schools offering them were first year typewriting, first year bookkeeping, first year shorthand, and clerical practice; (2) The most popular basic business courses in terms of the percentage of schools offering them were general business, business law, and economics; (3) The average scholastic ability of all business students in the survey was slightly above average (105.89 I.Q.); (4) Business courses having students of higher than average ability were notehand, economics, second year shorthand, consumer economics, secretarial practice, and first year typewriting, (5) Business courses having students of lower than average ability were recordkeeping, consumer education, salesmanship, and retailing. (MM)

VT006 448

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C.1

A FOUR STATE
SURVEY OF BUSINESS EDUCATION PROGRAMS

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VT006448

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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THE PROBLEM

This pilot study is concerned with an examination of the business curriculum in terms of the course offerings and the scholastic ability of students enrolled in the various business subjects.

The results of this study should provide information that will be of assistance in business curriculum development in the high schools of the four states surveyed: Iowa, Minnesota, North Dakota, and Wisconsin. Some specific questions answered as a result of this study are: What is the status of business education in terms of: a) business courses offered in small, medium, and large high schools; b) grade levels at which courses are offered; and c) the scholastic ability of students enrolled in the various subjects.

Evidence indicates that clerical occupations is the second most rapidly expanding occupational group, with a predicted 18 percent increase in employment from 1960-1975. The clerical category includes such jobs as: bookkeeping and accounting clerks, bookkeeping machine operators, general office clerks, file clerks, office machine operators, stenographers and typists.

Many of the skills, knowledges, understandings, and attitudes needed for employment, adjustment, and advancement in clerical occupations are taught in high school business courses.

The results of a national survey in October, 1963 showed that, of the June, 1963 graduates entering the labor force, by far the largest group represented was the clerical worker group (37%).

In view of the foregoing facts the importance of business and office education in the high school is clear.

Another important contribution of this study is that it provides a guide for a nationwide study to be repeated periodically so that trends could be observed as to curriculum patterns, enrollments, and type of students in the business programs of the high schools in the United States.

RELATED RESEARCH

Enrollments in high school business courses have been gathered sporadically (1949 and again in 1962) by the U. S. Office of Education.

As a result of the U. S. Office of Education survey made in 1958, a report was published in 1962 entitled What High School Pupils Study.* Students earned a greater proportion of credits in business courses than in courses of any other non-academic area. This study identified programs of study pursued by high school pupils of various scholastic abilities. The study was conducted to help leaders in education answer some of the most frequently asked questions regarding: What curricula enroll most pupils? What is the general scholastic ability of pupils in various curricula? In what types of programs are pupils in the small high schools enrolled, as compared with pupils in the medium and large schools?

A number of separate states have made studies of high school enrollments; (Connecticut in 1946, Florida in 1959, Illinois and Maine in 1957, Maryland in 1958, Pennsylvania in 1959, Texas in 1960, Washington in 1962, Nebraska in 1964) but no systematic gathering of detailed enrollment information in business has been done.

It is hoped that this study will provide a pattern for gathering detailed information about the business curriculum and the specific subjects; and that such information will help to observe specific and general trends in high school business programs by state, region and the nation.

QUESTIONS TO BE ANSWERED

The specific questions to be answered by this research are:

1. What business courses are offered in small, medium, and large schools?
2. At what grade levels are courses offered in various size schools?

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*Greer, Edith S. and Richard M. Harbeck, What High School Pupils Study, U.S.O.E. Bulletin OE-33025, Washington D. C.: U. S. Government Printing Office, 1962.

3. For what length of time, in semesters, are courses offered?
4. What is the scholastic ability of students enrolled in the various business subjects?
5. How successfully can the above information be obtained from schools with the procedure used in this study?

PROCEDURE

Obtaining Enrollment Information and Classifying Schools

This study involved secondary schools in Iowa, Minnesota, North Dakota, and Wisconsin. A complete list of secondary schools in the four states including enrollments was obtained through the cooperation of State Directors of vocational education.

Enrollments for grades 9 through 12 for individual schools were not available from all four states. Since information regarding 12th grade enrollments was obtainable for every school, it was decided to use 12th grade enrollments as a basis for classification of schools by size. The following school size classification was used:

Size	12th Grade Student Enrollment
Small	1 - 44
Medium	45 - 124
large	125 and over

Selecting the School Sample

All the small schools (12th grade size from 1-44) from all four states were combined. By means of a table of random numbers, a five per cent sample of small schools was selected from which to obtain certain information. The same procedure was used in selecting schools of medium and large size.

A sample of 84 schools was used for gathering data regarding curriculum offerings and ability of students electing business courses. A questionnaire was used to gather curriculum information. (see appendix d)

Based on a five per cent sample taken from all the schools in the four-state area, the number of schools selected by the sample was 84. The breakdown of the 84 schools is shown in Table 1.

TABLE 1. NUMBER OF SCHOOLS SELECTED BY THE SAMPLE

Size of Schools	Total Number	Number in Sample
Small	806	40
Medium	588	30
Large	276	14
TOTAL	1,670	80

Of the 84 schools, selected in the sample, 66 were eventually included as part of the study. The remainder did not or could not participate for various reasons after being contacted.

Table 2 shows the number of schools participating in the study, by size, and state:

TABLE 2. NUMBER OF PARTICIPATING SCHOOLS FROM EACH STATE AND BY SIZE OF SCHOOL

State	Small	Medium	Large	Total
Iowa	10	6	3	19
Minnesota	7	8	3	18
North Dakota	11	1	0	12
Wisconsin	8	3	6	17
TOTAL	36	18	12	66

Selecting the Student Sample

The names of all students in small schools taking a particular business subject were combined into one list. The same procedure was used for students taking a particular business subject in the medium and in large size schools. A sample of students was taken from each subject in each school size category. For those subjects of 30 or less, all students were used as the sample. A table of random numbers was used for the selection of a sample of 30 students if a subject had an enrollment of more than 30 students. The total sample of students drawn from all schools for all subjects was 1,630.

All 66 schools were involved as a result of the random sample selection. An information card (see appendix B) was prepared for each student and sent to his respective school requesting scores on ability tests. In some cases the schools could not supply the information requested. A breakdown of the returns is shown in Table 3.

TABLE 3. NUMBER OF SCHOOLS PARTICIPATING IN VARIOUS PHASES OF STUDY

School Size	Agreed to participate on first contact	Questionnaire and class lists returned	Completed Scholastic Ability Information Cards returned	Did not return Scholastic Ability information cards
Small	36	35	21	14
Medium	18	18	14	4
Large	12	12	12	0
TOTAL	66	65	47	18

For various reasons, insufficient data available, tudents drop outs, and transfers, 265 students were not included out of a total sample of 1,630. Therefore the total number of students used in the final analysis was 1,365.

TABLE 4. SUBJECT OFFERINGS BY SIZE OF SCHOOL

COURSE	Small 36 Schools			Medium 18 Schools			Large 12 Schools			% of All Schools	Rank
	Number	% of Small Schools	Rank	Number	% of Medium Schools	Rank	Number	% of Large Schools	Rank		
First Year Typing	32	89	1	18	100	1	12	100	1	94	1
Second Year Typing	11	31	5	3	17	12	7	58	7	32	7
Personal Typing	8	22	8	6	33	9	9	75	5	35	6
First Year Shorthand	21	58	3	17	54	4	12	100	1	76	3
Second Year Shorthand	8	22	8	10	56	3	9	75	5	41	5
Notehand	1	03	13	1	06	14	2	17	13	06	14
Clerical Practice	21	58	3	9	50	5	10	13	4	61	4
Secretarial Practice	6	17	11	7	39	7	5	42	8	27	9
Business Communications							1	08	22	02	24
Business English				1	06	14	2	17	13	05	16
Coop. Work Exp. in Office				1	06	14	1	08	22	03	22
First Year Bookkeeping	30	83	2	18	100	1	12	100	1	89	2
Second Year Bookkeeping							3	25	11	05	16
Business Machines				1	06	14	2	17	13	05	16
Recordkeeping				1	06	14	2	17	13	05	16
Business Arithmetic	9	25	6	6	33	9	4	33	9	29	8
General Business	7	19	10	8	44	6	2	17	13	26	10
Business Law	9	25	6	4	22	11	4	33	9	26	10
Consumer Education	1	03	13				2	17	13	05	16
Consumer Economics	1	03	13	2	11	13	2	17	13	08	13
Economics	6	17	11	7	39	7	2	17	13	23	12
Economic Geography	1	03	13				2	17	13	05	16
Retailing				1	06	14				02	24
Salesmanship				1	06	14	3	25	11	06	14
Coop. Work Exp. in Dist.				1	06	14	1	08	22	03	22
Occupational Relations							1	08	22	02	24
Distributive Education				1	06	14				02	24
TOTALS	16			22			25				

WHAT BUSINESS SUBJECTS WERE OFFERED?

Table 4 shows the subject offerings by size of schools. The small schools offered sixteen different subjects, the medium size schools offered twenty-two different subjects, and the large schools offered twenty-five different subjects. In all, 27 different subjects were made available.

First year typewriting, as expected, was the subject most offered by all schools. It was available in all large and medium size schools in 89 per cent of small schools.

First year bookkeeping ranked second as the subject most offered in all schools.

The third ranked subject was first year shorthand being offered in all large schools and in 54 percent of the medium size schools and in 58 per cent of the small schools.

Clerical practice ranked fourth and is being taught in 83 percent of the large high schools, in 50 percent of the medium sized schools and in 58 percent of the small schools.

AT WHAT GRADE LEVEL WERE BUSINESS SUBJECTS OFFERED?

Tables 5, 6 and 7 provide the evidence as to the grade level at which the various subjects were offered by the different size schools.

A school's offering for a particular subject is shown in one grade level or levels, column only. For example, if, in a particular school a subject is offered 10th graders only, that subject was tallied in column headed "10th grade". If a subject is made available to 10th, 11th and 12th graders, that subject would appear only in the column headed, "grades 10, 11, and 12."

A review of the three tables reveals the following:

1. First year typewriting is offered mostly at the 10th grade level in small schools while the medium and large schools make it available at the 10th, 11th and 12th grades.

Table 5 - Subject Offerings by Grade Level in Small Schools

COURSE	8	9	10	11	12	9 10	9 10-11	9-10 11-12	10-11	10 11-12	11-12
1. First Year Typing		2	13	1			2	2	6	5	1
2. Second Year Typing			1	1	7			2		1	
3. Personal Typing	3						1	1		1	1
4. First Year Shorthand				10	1					1	9
5. Second Year Shorthand					7						1
6. Notehand					1						
7. Clerical Practice				1	13						7
8. Secretarial Practice					4						2
9. Business Communications											
10. Business English											
11. Coop. Work Exp. in Office											
12. First Year Bookkeeping				4	12					1	13
13. Second Year Bookkeeping											
14. Business Machines											
15. Recordkeeping											
16. Business Arithmetic				1	2			1			5
17. General Business		1	4		1		1				
18. Business Law				1	1					1	6
19. Consumer Education											1
20. Consumer Economics											1
21. Economics				1	5						
22. Economic Geography											1
23. Retailing											
24. Salesmanship											
25. Coop. Work Exp. in Dist.											
26. Occupational Relations											
27. Distributive Education											

Table 6 - Subject Offerings by Grade Level - Medium Size Schools

							9	9-10		10	
	COURSE	8	9	10	11	12	9-10	10-11	11-12	10-11	11-12	11-12
1.	First Year Typing			4					2	1	8	2
2.	Second Year Typing					1						3
3.	Personal Typing		1	2					1		2	
4.	First Year Shorthand			1	8							9
5.	Second Year Shorthand				1	9						
6.	Notehand											1
7.	Clerical Practice					6						3
8.	Secretarial Practice					7						
9.	Business Communications											
10.	Business English					1						
11.	Coop. Work Exp. in Office					1						
12.	First Year Bookkeeping				2	3					1	11
13.	Second Year Bookkeeping											
14.	Business Machines					1						
15.	Recordkeeping				1							
16.	Business Arithmetic				1	1			1			3
17.	General Business		1	3			2				2	
18.	Business Law					1					1	2
19.	Consumer Education											
20.	Consumer Economics					1						1
21.	Economics					5						
22.	Economic Geography											
23.	Retailing						1					
24.	Salesmanship					1						
25.	Coop. Work Exp. in Dist.					1						
26.	Occupational Relations											
27.	Distributive Education					1						

Table 7 - Subject Offerings by Grade Level in Large Schools

							9	9-10		10	
COURSE	8	9	10	11	12	9-10	10-11	11-12	10-11	11-12	11-12
1. First Year Typing			1							10	1
2. Second Year Typing				1	3						3
3. Personal Typing								1		4	4
4. First Year Shorthand				5							5
5. Second Year Shorthand					10						
6. Notehand											2
7. Clerical Practice					10					1	
8. Secretarial Practice					6						
9. Business Communications						1					
10. Business English					2						
11. Coop. Work Exp. in Office					1						
12. First Year Bookkeeping				1	3					1	7
13. Second Year Bookkeeping					2						1
14. Business Machines					1						1
15. Recordkeeping					1						1
16. Business Arithmetic										1	2
17. General Business			1							1	
18. Business Law				1							3
19. Consumer Education											2
20. Consumer Economics					1						1
21. Economics					2						
22. Economic Geography					1					1	
23. Retailing											
24. Salesmanship				1							2
25. Coop. Work Exp. in Dist.					1						1
26. Occupational Relations					1						
27. Distributive Education											

2. The subjects of Clerical Practice, Business English, Cooperative Office Work Experience, Economics, and Salesmanship were offered almost exclusively to 12th graders.
3. Offerings to both 11th and 12th grade students included First Year Bookkeeping, Business Arithmetic, Business Law, and Consumer Education or Consumer Economics.
4. General Business was most often given at the 10th grade level. However, this study did not specifically include the Junior High School offerings so does not reveal the 9th grade General Business offerings.

FOR WHAT LENGTH OF TIME WERE SUBJECTS OFFERED?

Table 8 contains information regarding the number of semesters each subject was taught.

In general the most popular length of time business subjects were offered was two semesters. In fact of the 406 subject offerings by all schools, 203 were for two semesters.

Subjects that were most often given for only one semester were: Personal typewriting, Notehand, Business Machines, Business Law, Consumer Education, Economics, Retailing, Salesmanship.

TABLE 8. NUMBER OF SEMESTERS DEVOTED TO EACH SUBJECT BY SIZE OF SCHOOL

COURSE	One Semester			Two Semesters			One or Two Semesters			Four Semesters			One, Two Three or Four Semesters			Two or Three Semesters		
	S	M	L	S	M	L	S	M	L	S	M	L	S	M	L	S	M	L
First Year Typing	2		1	21	11	8	8	6	3				1					
Second Year Typing	4			2	2	5	3	1	2				1			1		
Personal Typing	7	5	8	1					1									
First Year Shorthand				12	12	8	8	5	4				1					
Second Year Shorthand	2			5	5	6	1	5	3									
Notehand	1	1	2															
Clerical Practice	4	2		13	5	8	3	2	2				1					
Secretarial Practice	1	2		2	3	4	3	2	1									
Business Communications									1									
Business English		1				1			1									
Coop. Work Exp. in Office						1		1										
First Year Bookkeeping		1		17	9	8	11	7	4	1			1					
Second Year Bookkeeping									3									
Business Machines		1	1						1									
Recordkeeping		1				2												
Business Arithmetic	1	1	1	7	3	2	1	2	1									
General Business		4	1	4	3		3	1	1									
Business Law	7	3	2	1	1	1	1		1									
Consumer Education	1		1			1												
Consumer Economics				1		2												
Economics	6	5	1			1		2										
Economic Geography	1					2												
Retailing		1																
Salesmanship		1	2			1												
Coop. Work Exp. in Dist.						1		1										
Occupational Relations						1												
Distributive Education								1										
TOTALS	37	29	20	86	54	63	42	36	29	1			5			1		

S - Small Size Schools
M - Medium Size Schools
L - Large Size Schools

WHAT WAS THE SCHOLASTIC ABILITY OF STUDENTS ENROLLED IN VARIOUS BUSINESS SUBJECTS?

Scholastic ability data were secured from the schools by means of a personal information card (appendix B). Scholastic ability data were reported in three forms: Percentile rank; I. Q. score; raw score.

Of the scholastic ability data received for 1,365 students, percentile rank was used for 462 students and the I. Q. score was used for 903 students.

Naturally the schools in the study reported the I. Q. and Percentile Rank based on a particular test score they had available at the time the information was requested. Appendix D contains a listing of the different tests used as a basis for reporting scholastic ability.

Inasmuch as there were several different ability tests used, I. Q. test scores were combined. The same procedure was used with test scores reported as percentile ranks. At best this procedure provided only a rough estimate of scholastic ability.

Table 9 provides evidence of the ability level of students by size of school. The evidence indicates that the scholastic ability of the entire sample of business students to be slightly above average.

TABLE 9. MEAN ABILITY LEVEL OF ALL STUDENTS BY SCHOOL SIZE

School Size	Number of Schools	Total Sample Size	Total I. Q. Scores	Mean I. Q. Score	Total Percentile Rank	Mean Percentile Rank Score
Large	13	718	470	104.7	248	54.38
Medium	17	441	272	107.16	169	45.70
Small	36	206	161	107.22	45	43.96
Over All	66	1365	903	105.89	462	50.19

Table 10 shows the mean Percentile Rank of 462 students by subject and school size. The data shown includes 19 subjects in large schools 18 subjects in medium size schools, and 8 subjects in small schools.

In looking at total Percentile Rank for each subject, the range is from a low of 36 for Consumer Education to a high of 76 for the subject of Notehand.

It is interesting to note certain subjects where the percentile rank differed somewhat among the school sizes. For instance, the average percentile rank of students taking first year shorthand was 76 in large schools, 29 in medium, and 47 in small schools.

The average percentile rank of students enrolled in Clerical practice was 60 in large schools, 37 in medium schools, and 36 in small schools.

In cooperative office work experience, the average percentile rank for students in large schools was 63 while only 32 in medium size schools.

A much higher percentile rank for students in medium size schools than for students in large schools taking recordkeeping and business arithmetic is evident.

Table 11 reports the mean I. Q. scores of 903 students by course and school size. Data are reported on 24 subjects in large schools, 15 subjects in medium size schools, and 12 small school subjects.

The I. Q. range for all student data analyzed by course was from a low of 97 in Recordkeeping to a high of 113 in Notehand. In the cases of Recordkeeping and Notehand, only 11 and 20 students respectively were used in computing the mean I. Q.

Table 12 shows the courses listed in rank order according to the mean I. Q. scores and according to the Percentile Rank scores. They have been placed side by side for easy comparison.

TABLE 10. MEAN PERCENTILE RANK OF 462 STUDENTS BY SUBJECT* AND SCHOOL SIZE

COURSE	Large Number	 % Rank	Medium Number	 % Rank	Small Number	 % Rank	Total Number	 % Rank	Ranking
First Year Typing	9	51	9	43	9	43	27	47	13
Second Year Typing	7	49	4	45	-	--	11	48	11
Personal Typing	16	74	8	61	-	--	24	69	3
First Year Shorthand	10	76	9	29	7	47	26	51	8
Scond Year Shorthand	13	73	7	60	-	--	20	68	5
Notehand	15	76	1	93	-	--	16	76	1
Clerical Practice	13	60	10	37	3	36	26	48	11
Secretarial Practice	-	--	10	61	2	68	12	61	6
Business Communications	30	58	-	--	-	--	30	58	7
Coop. Work Exp. in Office	3	63	14	32	-	--	17	43	15
First Year Bookkeeping	15	48	5	48	9	31	29	42	17
Second Year Bookkeeping	15	72	-	--	-	--	15	72	2
Recordkeeping	19	25	17	57	-	--	36	39	21
Business Arithmetic	9	27	9	57	5	53	23	44	14
General Business	14	36	4	48	6	35	24	37	22
Business Law	2	77	4	24	4	67	10	51	8
Consumer Education	28	36	-	--	-	--	28	36	23
Consumer Economics	18	69	-	--	-	--	18	69	3
Economics	3	60	6	47	-	--	9	51	8
Retailing	-	--	14	43	-	--	14	43	15
Salesmanship	9	37	-	--	-	--	9	37	20
Coop. Work Exp. in Dist. Ed.	-	--	19	41	-	--	19	41	18
Totals	248		169		45				

* No Percentile Rank data was available from schools for the following courses: Accelerated Shorthand, Business English, Business Data Processing, Business Organization and Management, Principles of Business, Economic Geography, Advertising, Marketing, Merchandising, and Occupational Relations.

TABLE 11. MEAN I. Q. SCORES OF 903 STUDENTS BY SUBJECT* AND SCHOOL SIZE

COURSE	Large Number	Large Mean I. Q.	Medium Number	Medium Mean I. Q.	Small Number	Small Mean I. Q.	Total Number	Total Mean I. Q.	Total Ranking
First Year Typing	20	107	17	108	11	107	48	107	7
Second Year Typing	23	100	27	106	16	107	66	104	14
Personal Typing	14	109	16	108	24	105	54	107	7
First Year Shorthand	20	104	17	109	12	107	49	106	10
Second Year Shorthand	17	107	17	107	10	117	44	109	33
Notehand	11	117	9	109	--	--	20	113	11
Clerical Practice	16	95	6	118	7	99	29	101	21
Secretarial Practice	30	110	17	104	27	108	74	108	6
Business English	29	103	--	--	--	--	29	103	17
Coop. Work Exp. in Office	20	109	--	--	--	--	20	109	33
First Year Bookkeeping	12	102	19	108	9	107	40	106	10
Second Year Bookkeeping	14	106	--	--	--	--	14	106	10
Business Machines	27	103	--	--	--	--	27	103	17
Recordkeeping	11	97	--	--	--	--	11	97	25
Business Arithmetic	21	100	21	105	12	106	54	104	14
General Business	16	107	22	107	8	100	46	107	7
Business Law	27	105	18	106	9	102	54	105	13
Consumer Education	2	104	--	--	--	--	2	104	14
Consumer Economics	12	98	30	104	--	--	42	102	20
Economics	27	111	20	107	16	111	63	110	2
Economic Geography	30	101	--	--	--	--	30	101	21
Retailing	--	--	16	101	--	--	16	101	21
Salesmanship	20	100	--	--	--	--	20	100	24
Coop. Work Exp. in Dist. Ed.	30	103	--	--	--	--	30	103	17
Occupational Relations	21	100	--	--	--	--	21	100	23
Totals	470		272		161				

* No I. Q. scores were available from schools for the following courses: Accelerated Shorthand, Business Communications, Business Data Processing, Business Organization and Management, Principles of Business, Advertising, Marketing, Merchandising, and Distributive Education.

TABLE 12. SUBJECTS LISTED IN RANK ORDER
BY STUDENT I. Q. AND PERCENTILE RANK MEANS
FOR STUDENTS IN THE SAMPLE

I. Q.				Percentile Rank			
Rank Order	Course	No.	Mean Score	Rank Order	Course	No.	Mean Score
1	Notehand	20	113	1	Notehand	16	76
2	Economics	63	110	2	Second Year Bookkeeping	15	72
3.5	Second Year Shorthand	44	109	3.5	Personal Typing	24	69
3.5	Coop. Work Exp. in Office	30	109	3.5	Consumer Economics	18	69
5	Secretarial Practice	74	108	5	Second Year Shorthand	20	68
7	First Year Typing	48	107	6	Secretarial Practice	12	61
7	Personal Typing	54	107	7	Business Communications	30	58
7	General Business	46	107	9	First Year Shorthand	26	51
10	First Year Shorthand	49	106	9	Business Law	10	51
10	First Year Bookkeeping	40	106	9	Economics	9	51
10	Second Year Bookkeeping	14	106	11.5	Second Year Typing	11	48
12	Business Law	54	105	11.5	Clerical Practice	26	48
14	Second Year Typing	66	104	13	First Year Typing	27	47
14	Business Arithmetic	54	104	14	Business Arithmetic	23	44
14	Consumer Education	2	104	15.5	Coop. Work Exp. in Office	17	43
17	Business English	29	103	15.5	Retailing	14	43
17	Business Machines	27	103	17	First Year Bookkeeping	29	42
17	Coop. Work Exp. in Dist.	20	103	18.5	Coop. Work Exp. in Dist.	19	41
19	Consumer Economics	42	102	18.5	Distributive Education	19	41
21	Clerical Practice	29	101	20	Recordkeeping	36	39
21	Economic Geography	30	101	21.5	General Business	24	37
21	Retailing	16	101	21.5	Salesmanship	9	37
23.5	Salesmanship	20	100	23	Consumer Education	28	36
23.5	Occupational Relations	21	100				
25	Recordkeeping	11	97				

LIMITATIONS OF THE STUDY

1. Incomplete returns prevented the use of the original number of schools in the sample (84 schools). Sixty-six schools were used in the final analysis.
2. Incomplete returns prevented the use of the original number of students selected to be used in gathering scholastic ability test scores (1,630 students). The final analysis used scores gathered on 1,365 students.
3. A random sample of 30 students enrolled in each course reported on the questionnaire was selected. In some cases, less than 30 students were listed for a particular course. This resulted in computing a mean on the scholastic ability test scores based on a smaller number of students.

4. Scholastic ability test scores were taken from available school records. Scores reported were based on 12 different scholastic ability tests (Appendix D).
5. To arrive at a mean percentile rank scholastic ability score for students taking an individual course, percentile ranks reported on various tests were combined and averaged. The same procedure was used with I. Q. scores.

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this pilot study is to determine: (1) the business subject offerings, (2) grade level of offerings, (3) length of subjects offered and (4) ability level of business education students in a four-state area.

The survey included samples of small, medium, and large schools drawn from a population of all schools in the states of Iowa, Minnesota, North Dakota and Wisconsin. The sample selected included a total of 84 schools.

Size of school classification was based on the size of the senior class at the time the survey was begun. Small schools were designated as those with 12th grade student enrollments of 1-44; the medium size from 45-125; and the large size 125 and over.

After initial and follow-up communication with the sample schools to gather data concerning subjects offered, length of offerings, grade level and class lists for each subject offered, 66 schools indicated willingness to participate.

The sixty-six schools included -- 36 small schools, 18 medium schools, and 12 large schools.

A sample of 1,630 students were drawn from class lists received from the participating schools. A total of 1,365 scholastic ability test scores of students in the sample were secured from the schools.

Information concerning (1) the number of schools offering business courses, (2) the grade level of subjects offered, and (3) the length of subjects offered was gathered using a questionnaire (Appendix A). Personal information cards (Appendix B) were used to gather data concerning ability level of the students.

Conclusions

The most popular vocational business courses in terms of the percentage of schools offering them was:

1. First year typewriting
2. First year bookkeeping
3. First year shorthand
4. Clerical practice

The most popular basic business courses in terms of the percentage of schools offering them was:

1. General business -- more popular in medium size schools
2. Business Law -- more popular in large size schools
3. Economics -- more popular in medium size schools

First year typewriting is offered mainly at the 10th grade level in small schools while medium and large schools make this course available, in most cases, to students in 10th, 11th, and 12th grades.

The average scholastic ability of all business students included in the survey was slightly above average.

Business courses having students of higher than average ability enrolled were:

Notehand

Economics

Second year shorthand

Consumer economics

Secretarial practice

First year typewriting

Business courses having students of lower than average ability enrolled were:

Recordkeeping

Consumer education

Salesmanship

Retailing

Recommendations

1. A study similar to this pilot survey be conducted on a nationwide basis every five or ten years in order to observe trends over time.
2. In attempting to determine the scholastic ability of the sampled students, a pre-selected ability test should be administered to all students, in the sample in order that a common test result is available for analysis.
3. Junior high school offerings be included in the nationwide survey.

VT 006 651
Swanson, Robert
Innovation and the Three Fallacies. Dimensions for Exploration.

State Univ. of New York, Oswego. Coll. at Oswego
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 68 18p.

*EDUCATIONAL PROBLEMS; *EDUCATIONAL INNOVATION; *EDUCATIONAL PHILOSOPHY; *CHANGING ATTITUDES; *TEACHER ATTITUDES

Three basic problems facing educators involve the fallacies of the "misplaced mission," the "favorite tactic," and the "unexamined practice." These fallacies should be avoided but they can help us analyze problems by serving as guideposts. Acceptance of the possibility that we may be following a "misplaced mission" should allow us to single out an objective or emphasis to follow. It should cause us to state explicit behavioral objectives and to determine whether or not we achieve these objectives. Knowing of our tendency to use a "favorite tactic" should affect the selection of presentation methods, changing whole subject matter, and changing organizational approaches. Acceptance of "unexamined practice" as a concept provides an orientation allowing for unused alternatives to be examined and used. (EM)

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Dimensions for Exploration

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INNOVATION AND THE THREE FALLACIES

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INNOVATION
AND THE THREE FALLACIES

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Dr. Swanson has served as Convention Program Chairman, First Vice-President and President of the American Industrial Arts Association. He has taught general shop, woodworking, plastics, industrial education, research, and statistics. He is the author of the textbook, "Plastics Technology" and the winner of the American Technical Society's 1958 Research Award. Dean Swanson has also published several articles in professional journals. Dr. Swanson is the inventor of a plastics forming press manufactured for use in school and industry and he serves as an industrial consultant in plastics equipment for two manufacturers.

If one were to keep a tally of the topics of speakers on education the past few years he would probably find ranking high on the list such ideas as *innovation* and *change*. At the past two conventions of the American Industrial Arts Association, over half of the keynote speakers in some way discussed these ideas. We are well acquainted with the facts of change and I don't propose to give you any more facts. For one thing it is almost impossible to startle an audience any more by telling them how many different jobs they may expect to have in their working lives or what new products to expect next year or how many libraries it will take to hold the knowledge we create each day.

But I would like to discuss with you three basic problems that we as educators face in dealing with innovation, promoting innovative ideas, and incorporating innovation into our work.

Let me outline the problems with a fable — a fable of the life and times of the coyote as told by an old coyote in his declining years. I call this the three fallacies and adapted it from a fable of Harold Benjamin's.

> We coyotes used to have a pretty easy life a long time ago. We had to find enough to eat and keep away from our enemies. The Indians didn't bother us much. We just studied the tracking of jackrabbits, how to dig field mice out of their burrows, and how to keep away from timber wolves, cougers, and bears.
>
> Then the white man came, drove out the Indians, killed the buffalo, and built up ranches and farms. He also brought along chickens, ducks, turkeys, and geese — a pretty nice change from stringy old jackrabbits and dusty field mice, but he also packed fire arms, pistols, shot guns,

carbines, and rifles. Every coyote was forced to study those weapons. He had to know how close he could let a man get with a pistol, how much further he had to stay from a carbine, and what to do if he saw a 'scope' sight on a rifle. Here is where you see three mistakes coyotes made. The first was when an animal got to be so expert about guns that he forgot what he was trying to do. I had an uncle who made this mistake. He was always telling us cubs about guns. The longer the barrel, he said, the farther away you had to stay. Then one of Jim West's sons got a rifle that looked like a carbine and the thing my uncle forgot was that the main idea was to stay alive so he should be suspicious of all guns at all ranges. He let this boy get within 300 yards of him because he wanted to study this new gun. Just before that bullet hit him right between the eyes, he probably knew more about guns than any other living coyote. He died a victim of shifting his major concern from his purpose to his subject. You might say he was a victim of the fallacy of the MISPLACED MISSION.

Some other coyotes lost out because they had a favorite method or two at which they became so skilled that they neglected studying any other methods. They were like the coyote who was digging a tunnel under Mrs. West's hen house to get at the main source of supply. This fellow was careful; he figured his escape route carefully before he ever started the project. He found that if he would slink along the side of the hen house, run through a hole in the corral fence, dash through the horses in the corral, jump a low bar on the other side, and disappear into the sage brush, he could escape in five seconds flat. Then he began his digging. Every time he heard any one step on the back porch he slunk along the hen house, ran through a hole in the corral fence, dashed through the horses in the corral, and jumped the low bar on the other side. And do you know that one day just before a slug caught him between the shoulder blades as he was going over that favorite low bar on the fence, he was probably the most practiced living coyote in the world at this particular evasive tactic. He was a victim of the fallacy of the FAVORITE TACTIC.

Of course all training, all education, is experience, and there is one thing about experience in general that many animals and men overlook, especially the most experienced ones. That is the tendency of all experience to slow up the animal's and man's response when he meets a new situation.

We had a coyote one time in our pack who never got within the range of any gun — he was too experienced. He never stepped in a trap — he knew all about traps. He laughed at wolves, dogs, and cougars; he was too smart for them. But when he went back to finish up eating a lamb killed the night before, there being no sign of traps, dogs, or guns, he ate heartily, and the meat was poisoned. Just before he died he was undoubtedly the most experienced living coyote in all this world. He died a victim of too much experience; you might say he was a victim of the fallacy of UNEXAMINED PRACTICE.[1]

These, then, are my guide posts; misplaced mission, favorite tactic, unexamined practice. Let's see how they might apply to some things in which we become involved.

Let us examine how we might identify first of all whether we are victims of the fallacy of the misplaced mission and secondly how we might avoid it.

The first prerequisite is, of course, to be absolutely sure of what our mission is. There have been many national and local statements of the aims of education. Any one who has had a course in education has certainly heard of the Seven Cardinal Principles, The Imperative Needs of Youth, or the Purposes of Education in an American Democracy.

[1] Adapted from Harold Benjamin, "Old Man Coyote and His Crystal Ball, or the Doctrine of the Beloved Subject." The University of South Florida Educational Review. (Volume one, Number two, Spring, 1963)

We have followed a similar pattern in industrial arts. The long quoted nine objectives of industrial arts first written in 1937 and revised in several subsequent bulletins are:

1. Interest in industry
2. Appreciation and use
3. Self-realization and initiative
4. Cooperative attitudes
5. Health and safety
6. Interest in achievement
7. Orderly performances
8. Drawing and design
9. Shop skills and knowledge

In an attempt to reduce the number of objectives and place emphasis on the unique purposes, two groups made proposals to reduce the number to four:

1. Understanding of industry
2. Discover talents
3. Problem-solving
4. Develop skills

It is very difficult to argue with statements that cover as many good ends as these do. Yet, their very breadth makes it difficult to do a great deal about them or even to know if we have accomplished anything toward them at all.

How then, can we single out *an* objective or *an* emphasis to follow? Perhaps developments in our society today provide a clue. I have already said that it is trite to point out that we live in a world characterized by change — at an ever-increasing rate. And we have faith that this will continue.

But behind all this has been a change at a more fundamental level. In fact, it is at the heart of all that is taking place. This is a change in the nature of human knowledge. In the past we have accepted things as true on many grounds. Some things have been accepted simply because they were thought traditionally to be true. Others were regarded as fact simply because we wanted to believe them. The underlying change is the increased emphasis we have placed on truth arrived at rationally and tested through empirical means. This is scientific truth and is not restricted to subjects we label "science." It is truth arrived at from a scientific approach in any field of human endeavor. The force which is remaking the world is the national intellect of men; and the man who can earn his own dignity in the future will be the man who can use that force.

Bruner[2] has criticized the school for dealing far too heavily with the *achievements of man* rather than with the *possibilities of man.*

I would therefore submit that the under-lying purpose of education is "to develop the rational powers of man by introducing students to the basic areas and systems of knowledge and providing them with the tools and incentives for further learning."

If we accept this as an overall objective or if we even accept the need to define and examine our mission the next step is to state the purposes in a manner that makes very clear what we expect to accomplish. One very good approach is to ask, "How will I know when I have accomplished this?"

One of the recent developments that has done a good deal in this direction is the work in programmed learning and teaching machines. Since these devices cannot think for themselves and cannot adapt along the way as the human teacher can, it is necessary to plan out very carefully ahead of time what is attempted for accomplishment. A program of learning must be prepared with a very clear end in view. It has been reported by writers of programs that one thing it does is to make the programmer very conscious of the aims of the program — whether, for example, one is trying to get students to memorize material or use material cumulatively in doing progressively more difficult problems. He becomes more cognizant of the end results of his teaching than he might be otherwise.

To illustrate briefly the kind of wording that aids in making objectives more precise and definite as

[2] Jerome S. Bruner, "Toward a Theory of Instruction," Cambridge, Massachusetts, Harvard University Press, 1966, p. 36.

opposed to vague and general: Stating objectives with such words as know, understand, "really" understand, appreciate, "fully" appreciate, grasp the significance of, enjoy, believe, and have faith in allows for many and various interpretations of what kind of conduct is expected. More definite action is implied by memorize, write, recite, identify, differentiate, solve, construct, list, compare, contrast.[3] While merely the wording used with objectives won't alone make them more specific, the proper wording can aid the teacher in deciding where he is trying to go.

It is important too that students understand, accept, and learn to set realistic goals for themselves. All teachers realize that many of the goals toward which students operate are quite different from those set up by the teacher. Lockette,[4] in a study with high school industrial arts pupils, found that they could be taught to set realistic task goals. More important, he found that those who set goals, realistic or otherwise, achieved higher levels than did those with no goals at all.

Teachers often look at the job of writing objectives as one of the "necessary evils" of teaching. I talked recently with a foreign student who was teaching thermodynamics in an engineering college. I asked what he was doing at Stout. He stated that he was sent primarily to learn about how to present materials — how to teach. When asked what he was doing specifically, he said that he was just that week learning how to write objectives. In his seven years of teaching he had never stated an objective for what he was doing. I asked what he thought of the idea and he said he thought it was good but probably more appropriate for elementary and high school teachers than for college teachers. I asked why and he said that his job was rather simple and direct; he was supposed to teach thermodynamics to his students and that was all there was to it. I didn't carry this further because we were in a social situation and my wife was giving me side glances but I would like to have asked him how he knew when he had "taught them thermodynamics." Was it when they could cite a principle of thermodynamics or was it when they could solve a problem in heat transfer in a plastic mold? As soon as we begin to answer this kind of question we are in the realm of stating objectives. He may well have done this and defined his objectives without calling it that.

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[3] Robert F. Mager, Preparing Objectives for Programmed Instruction. San Francisco, Fearon Publishers, 1962, p. 11.

[4] Rutherford Lockette, "The Effect of Level of Aspiration Upon the Learning of Skills," unpublished EdD Thesis, University of Illinois, 1955.

In contrast to this foreign student we have the person who makes the statement, "I teach boys and girls, not math," or "I teach kids, not English." This represents an appropriate emphasis and is possibly an indication that this person realizes that he has thirty individuals in his class with different needs and interests. But we do not just teach children; something must be the result of the teaching process. This teacher may mean that he is more interested in building good attitudes than in the memorization of the dates of the Magna Carta or the discovery of America. But as soon as he states what these children will be like if he is successful in "teaching" them, he has stated his objectives. And until he does this, I question his results, regardless of his lofty intent.

Let us now look at the fallacy of the favorite tactic. One of the first steps in overcoming the likelihood of becoming a victim of this fallacy is awareness of other methods. Again, it is trite to list all the new teaching technologies available. Programmed learning, CCTV, open labs, team teaching, and teaching machines are written about in all our journals. Each unit should be looked at in terms of all possible ways in which it could be taught, and in which it can be made more realistic and interesting.

But in talking about avoiding the fallacy of the favorite tactic, I am speaking not only of methods of presenting subject matter. If you read many of the studies contrasting the various ways of teaching a given unit you find so often it is reported that there is "no significant difference" in the results obtained by the various methods. I am speaking of varying the whole subject matter and approach to its organization as a means of achieving your purpose.

This past decade has seen basic upheavals in the whole approach to a number of the schools' traditional disciplines. Only in the past few years have we seen concerted effort in industrial arts to visualize and try out massive changes in what are conceived as means of organizing and presenting the subject. It has been difficult for many to see other ways of organizing than around a few materials or trade groupings.

Many years ago it was thought that the actual content was unimportant except that the tougher it was the more effective it was for training the mind. "Toughness" was usually measured in terms of how unrealistic the material was. Educators discarded this idea pretty much but in the process swung to the principle of transfer of identical elements. You could transfer what you learned in one situation to another to about the degree that the new situation was like the old. If we really accept this concept of transfer, we in schools might as well quit because very seldom can we simulate the situations of life very closely in schools. More recent developments in educational psychology have shown the possibility of a sort of "general transfer" of principles and attitudes. In this kind of transfer, what is learned initially is not a skill but a general idea which can be used as a basis for recognizing subsequent problems as special cases of the idea originally mastered. This type of transfer is at the heart of the educational process — the continual broadening and deepening of knowledge in terms of basic and general ideas.

Bruner, in his most recent book, *Toward a Theory of Instruction,*[5] makes a case for a basic look at sequence in the teaching method. He points out that the most common approach of "organized" teachers is an expository one. A generalization or principle is quoted; interesting examples of its application are presented; and hopefully the student puts it to use.

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[5] Bruner, op. cit.

He states that "if it is true that the usual course of intellectual development moves from enactive to symbolic, it is likely that an optimum sequence will progress in the same direction."[6] In a current study[7] with conceptual learning of industrial arts we are trying to avoid a too early verbalization of the concepts. This practice often leads to an ability to glibly recite the concept with no real meaning attached.

Early approaches to the teaching of languages often involved the extensive learning of rules for all aspects of the language before any "practical" language problems were presented. Some experimentation with methods for use during the war produced some startling results in short times. I can recall a voice teacher who taught where I took music lessons as a boy. Her method was to have students sing scales of all sorts for months before they ever sang a song. The teaching of reading through practical and interesting material has been much more successful than through unrealistic and boring content. I can recall a friend who was learning French for a PhD exam by reading "Fifi." He couldn't wait to learn the new words because he was very interested to learn what the spicy French maid was going to get involved in next.

We are all familiar with the psychological principle of methods limits. We can develop efficiency with a given method to a point where we are getting the maximum possible from the method. The only chance for improvement then is through a change in the method. We see athletic records being broken. Many times the record is broken because the athlete has changed his methods and equipment. Pole vaulting is a recent example using the fiberglass pole. The oldtimer can scoff, and maybe the purpose of pole vaulting contests is not basically to jump higher by any method but to see who can jump highest with the given method. But education is not in this same position; we are charged with teaching and learning all that we can in the shortest possible time, regardless of method. One of the industrial concepts we are trying to get across in industrial arts is the concept of methods limits.

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[6] ibid, p. 49.

[7] Wesley L. Face, Eugene R. F. Flug, and Robert S. Swanson, "Concentrial Approach to American Industry" Chapter 4 in **Approaches and Procedures**, Fourteenth Yearbook of the ACIATE, Bloomington, Illinois, McKnight & McKnight, 1965.

In thinking of the presentation of materials to students for the purposes of their learning, it is a sobering thought to realize that learning takes place to about the degree that the student accepts the responsibility for his learning. When we correct a student who says "teacher learned me this today," by saying that "teachers teach and students learn," we are doing a good deal more than correcting his English. One of the main jobs of the teacher is to manipulate the learning environment until the pupil becomes involved in the learning situation himself. The recent successes of programmed learning are due in part to the fact that the learner can become involved with the task.

A practical advantage of varying your methods is in the renewed interest both the teacher and the student take. The classic experiment with the effect of lighting on the productivity of clerical workers at Western Electric illustrates this point. You will recall that the experimenters increased the intensity of light and found that the amount of work increased. They further increased the intensity and the output increased again. Then someone decreased the amount of light and the work increased again. The factor involved (often referred to as the Hawthorne Effect,) was that the situation was changing and the workers were interested in it. Perhaps that has implications for change in schools. For years, a stock answer to a successful methods experiment was to say "yes, but the Hawthorne Effect is all that is producing the results; it isn't really the new method." Many are now saying, "maybe that is true, but if it is, let's keep adding the Hawthorne Effect."

Let us now turn our attention to the third fallacy, that of unexamined practice. To avoid this we might simply say, "examine your experience." Examine it critically to see whether the effects are really the result of the causes or whether the effects are even what you thought they were.

It is interesting to ask of each thing you teach, "why would anyone want to know or be able to do this thing I am teaching him?" Can you give an illustration of where the student might use this knowledge now or in the future? I am not speaking of use in an extremely pragmatic sense either. If you can't give a satisfactory answer, or if your answer is that they need it for college, you can blame the colleges but you might seriously consider changing or eliminating the content.

Evaluate each teaching and learning activity against what you think you are achieving. For example, what is the purpose of your testing program? Basically, all things we do as teachers should enhance the learning of pupils; other purposes sometimes take over, but they are really subordinate to it. What is your normal testing procedure? Do you say, "clear your books and papers off your desk, we are going to take a test?" I once asked a class at the end of a test which list of instructions I had given them verbally at the beginning of the test. They chose this statement although I had really not given it, but they had certainly heard it before. The scientific method of approaching a problem lists as one of the steps in solving any problem, the gathering of all possible data to bring to bear on the problem. Yet we often deny them the data that is available in books, notebooks, etc. How many times do you suppose a test asking students to describe the scientific procedure has been given in this manner?

Are the activities that are used to achieve certain ends really achieving these ends at all? I read of a trouble shooting course for radio technicians that involved an analysis of the function of each tube and condenser in a radio circuit and what would result if it was defective. In practice, however, the service man was usually told what the trouble was and asked to fix it. It was found that the approach was not leading very efficiently to the solution of practical problems that he faced.

Some of you may have had experience with the teaching of aircraft identification by means of model silouettes. The air force's experience was that many could identify the silouette of the model but could not identify the real thing.

How many of us have a "favorite unit" that we teach. Think of yours. If you had to cut something from your course because of a shortage of time, would you cut your favorite unit? Upon examination, do you like this unit mainly because it is so valuable to students or is it because you can teach it well and have never really looked at it critically?

I may give the impression that I feel that all teachers fall into the trap of this fallacy. Such is not the case. In a study of the educational philosophy of teachers that I conducted five or six years ago I was *trying to determine the degree of* liberal viewpoint between experienced and inexperienced teachers. It was an attempt to determine if one group was more rigid in its approach to teaching than the other. I found difference at the five year level of experience. Teachers with more than five years of experience were more liberal in their selection and presentation of content. While there is not data in this study to determine why, I conjectured that beginning teachers have so many details to learn and master that they do not have time to consider too heavily the worth of what they are doing. Their knowledge of their subject is more limited and they may not question too closely whether what they have selected to teach is particularly valuable to the student. After a few years they master some of the fundamentals of class organization and control and are in a position to start deciding what is valuable and what is not. It's a little like fishing. If we aren't catching many, we are likely to put a six inch sun fish on the stringer. If the fishing is very good, we may consider releasing a three pound wall eye if we can replace it with a four pounder. This is the real value of experience — The replacing of three pounders with four pounders.

The fallacy of unexamined practice is the hardest of all to combat even if we try to. It simply means that the more experience one has in anything, the broader his views must be. Experience can dull the senses just as firmly entrenched habit can. When a new situation arises we tend to force it into some previous situation so that experience (or habit) can be called up to solve it.

The more experienced one is, the bigger his ideas must be. If an inexperienced person is afraid to try, this is understandable. But if an experienced person is afraid of a new idea or is too lazy to try, we are in trouble. Experienced teachers have found many things that work and may be reluctant to try something that might not. Yet it is the experienced who is secure and who can afford to risk occasional failure; he will not be destroyed by it.

In the final analysis, I am working up to a plea for taking cognizance of what we are trying to do, being flexible in our approach to its accomplishment, and continually evaluating our experience with it. With this approach, innovation will be enhanced, yes demanded.

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VT 006 652
Jarvie, Ian Charles
Technology and the Structure of Knowledge. Dimensions for Exploration.

State Univ. of New York, Oswego. Coll. at Oswego
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 68 21p.

*SCIENCES; *TECHNOLOGY; PHILOSOPHY; *OBJECTIVES; *KNOWLEDGE
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From one angle technology is a part of the logical structure of knowledge, and from another angle the whole of knowledge can be regarded as a substructure under technology. In the first instance technology is knowledge of "initial conditions," and in the second, knowledge is part of man's attempt to adapt his environment. Technology has different aims from science; furthermore scientific knowledge is generally taken to be putatively true statements about the structure of the world, while technological knowledge is know-how which works effectively under given conditions; it is "environment specific." Science and technology can be separated, since the laws of science encompass what is physically possible, while technology is closely connected with the several contingent variations within these bounds and includes applied science, invention, and engineering. Also, science addresses its questions to nature while technology puts its questions to both society and nature. Technology is coterminous with our attempts to come to terms with the world, that is, our culture and our society, and as such it contains both pure tools and all knowledge. (EM)

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TECHNOLOGY AND THE
STRUCTURE OF KNOWLEDGE

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CURRICULUM: **Structures To Reflect Technology**

TECHNOLOGY AND THE
STRUCTURE OF KNOWLEDGE

About the Author:

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The problem with which I want to engage your attention this evening requires a little more specification than is given in my title. It would seem obvious enough that technology is a species of knowledge. Our so called 'age of technology' seems to have more of this commodity we can call 'technological knowledge' than any previous age or society. You would expect, then, that technology as a species of knowledge would be highly revered, widely studied, and generally well understood in our society. You would think, in fact, that a talk with my title would be no more required than one on 'science and the structure of knowledge.' This happens not to be so. Technology is *not* generally revered, especially by intellectuals, *not* well understood and studied, and even has its claims to be a species of knowledge disputed. I take it as my task to try to dispel such views. What I shall suggest in the course of what follows is that from one angle technology is only a part of the logical structure of our knowledge; and that from another angle the whole of our knowledge can be regarded as a substructure, as included under technology. Viewed logically, technology is a substructure of knowledge; it is knowledge of what physicists call the 'initial conditions.' Viewed anthropologically, knowledge is part of man's multiform attempts to adapt to his environment which we call his technology. Resistance to recognition of these facts is fed, I shall suggest, partly by ancient snobbery and partly by sheer mistaken identification of technology with machine-technology.

Some philosophers — and it is not a new thing to find philosophers in the role of villains of the piece — fail to classify technology as knowledge at all. Before taking issue with them, and perhaps explaining their attitude, some review of their arguments may be called for. Professor Gilbert Ryle of Oxford University has drawn a very well-known distinction between two senses of the word 'know;'

namely, knowing *how* to do something, and knowing *that* something is the case.[1] We know *that* we live on an ovoid planet so many miles from the sun, with certain rotation periods, along with so many other planets, etc., etc. We may know *how* to tie a reef knot, swim the breast stroke, or drive a motor car without in any way being able to articulate this knowledge, or to explain what it is *that* we know when we know *how* to do these things. Moreover, although tieing knots and swimming are learned, we can forget them or forget that we know them. Not having ridden a bicycle for many years we might be inclined to say: 'I can't do it' or 'I've completely forgotten how to.' Yet, when placed in the saddle we are off without any trouble at all. What Ryle is saying is that there is a kind of knowing, namely the mastery of a technique, which is very definitely not knowledge in the traditional sense of the word. One can even be unconscious of having it. Politics is a particularly vivid case of this: political acumen, skill, and good sense is widely regarded as a talent or instinct which it is impossible to analyze into a series of statements saying *that* such and such is the case.

This knowing *how* to do things is called in America, 'know-how.' It is highly regarded and prized here. In England, where I come from, and Europe generally, this 'know-how' is spoken of rather slightingly as 'mere know-how;' the implication being that the really important thing is knowing *that* such-and such, from which the know-how will follow, if one can be bothered to sully one's hands with such prosaic matters. (Unfortunately, there is no such short locution as 'know-that,' such that one could say 'he has the know-that' in parallel to 'he has the know-how.' When we say 'do you know that,' 'know' is a verb and 'that' a preposition and they do not combine to become a noun like 'know-how.' So I shall have to persist with the clumsy expression 'knowing that.')

I shall argue that know-how certainly isn't enough by itself, although it is not to be despised either. It seems to me that know-how is more intellectual than it is being made out to be by Ryle; but that essentially either knowing that without know-how or know-how without knowing that is seriously deficient. Both know-how and knowing that are indispensible parts of human knowledge.

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[1] See G. Ryle, chapter 1 of The Concept of Mind, London 1949.

The problem, then, is whether technology or know-how is knowledge, and if it is, what kind of knowledge it is, what its place is in the structure of knowledge. Personally I dislike mystery stories and I always read the endings of tense novels first. So you will not be surprised if I proceed to outline my answer to the problem at once, and then proceed to elaborate on it for the rest of my allocated time.

My answer, then, is as follows. Technology does have somewhat different aims than science, it aims to be effective rather than true — and it can be the one without the other. Yet technology is knowledge of sorts; such know-how as we have tells us about what works in this world. Its position in the structure of knowledge is thus peculiar, because what happens to be effective in our part of the world may be a purely contingent matter and will also depend on what degree of effectiveness we happen to demand of technology. It may be enough for us to say of this drug that it cures this illness 90% of the time. We may then feel that we know *that* drug *x* cures illness *y*. But we do not. We know *that* drug *x* has a 90% effectiveness in curing illness *y*. We also know *that* it has a failure rate of 10% with illness *y*. The causes of illness *y* and the reasons drug *x* cures it may be completely unknown. Some of our drug technology, then, is based on the contingent fact that drug *x* sometimes cures illness *y*. Now in much of our medical technology we regard 90% effectiveness as very good; if we raise our demand — as we tend to do, human beings never being satisfied — we also make more urgent the question of cause and cure in its pure form. For except in the few cases where we stumble across an 100% effective cure by accident, the obvious way to effect an 100% cure is to find out the cause of the disease and devise a true cure that deals with that cause in a well-understood and controllable way.

This argument aims to show the sharp differences created by making the aim of an activity effectiveness rather than truth. What is effective may be true, or it may be false — Newtonian celestial mechanics is a very effective navigating tool but has been superseded in science by Einstein's relativistic mechanics— or it may be unknown, as in the case of drug *x*. Now, because we also value truth, attempts will be made to find out why drug *x* works as it does, but meanwhile it will go on being good technology, effective 90% of the time.

So truth is not the same as effectiveness. And when we talk of knowledge we usually mean knowledge of truth. What I shall suggest is that knowledge of effectiveness is knowledge of truth too, even if it is on a different logical level. It is, so to speak, true knowledge of *what* is effective. It is not true knowledge of *why* it is effective; it does not *explain* anything. But it is part and parcel of the whole truth, nevertheless.

The ancients left us with an idea of knowledge as proved truths. Contemporary philosophy has smashed this idea to smithereens and decreed that only the tautologies of logic and mathematics can be proved. but tautologies like 'all tables are tables' can hardly be knowledge, since they don't tell us anything. So a new conception of knowledge has arisen which discards proved truth and places the following mental reservation before all scientific assertions: 'this is a hypothesis, the best we can suggest at the moment. It will be revised as soon as we have reason to doubt it.' Nowadays, then, knowledge with a capital 'K' is generally taken to be putatively true statements; that is, statements tentatively advanced in the belief that they might be true and should be tested. Scientific knowledge is generally taken to be putatively true statements about the *structure of the world.* That water boils at 100°C is not a truth about the structure of the world, but a contingent fact about our local environment. Technology, it seems to me, is closer to knowing a lot of things whose *logical* status is like that of water boiling at 100°C, rather than like Newton's laws or Einstein's mass-energy equations. That there is a difference of level between these will be clear. It is perhaps not so easy to specify. Put briefly in a way that should become clearer later on, I would say that science aims at true laws which cover the entire physical world and explain the facts of the case about it. Know-how is knowing what works, how to do things in a small part of that world, with a precision as high as is demanded.

In expanding on all I have said so far about the problem of the place of technology in the structure of knowledge I want first of all to draw some distinctions which are often overlooked. The first is to note that technology is a portmanteau-word which includes under itself applied science, invention, implimentation of applied science and invention, and the maintenance of the existing apparatus — these last two being something like planning and engineering.[2] For the present I do not want to talk about engineering and maintenance, since they seem such purely practical matters that their status as knowledge doesn't arise. But invention and applied science do seem worth separate treatment.

First of all, invention. Invention can be as important in pure science as much as in other fields. Invention is discovering a way of doing something we already know to be possible. Persistence of vision makes the motion picture possible; but a great deal of inventiveness was required in order to make this possibility an actuality. Einstein's mass-energy equation and Rutherford's demonstration that the atom could be split made it clear that the atomic bomb was possible — although it was not clear to everyone at the time. Physicists were hotly divided about whether ways could ever be invented of sustaining a chain-reaction long enough to release a significant amount of energy. Now how does invention come into pure science? Mainly in the devising of experiments with which to test theories. Certain physical theories entail that light has pressure; some attempts have been made in the last few years to invent machines that

[2] For this point see Joseph Agassi, "The Confusion Between Science and Technology in the Standard Philosophies of Science," Technology and Culture, vol. 7, 1966, pp.348ff.

will detect this pressure; and so far all these attempts have failed. But this leads me to a qualification about invention of experiments. The attempt is to invent an apparatus to do a job which will be possible if the scientific theory under consideration is true. However, should that theory be false, the experiment will not work. Michelson and Morley's apparatus should have detected the ether wind. That it did not was not a reflection on the experiment they invented, but on the ether theory.

What is the character of the inventor's knowledge, then? It seems to me that the knowledge generated by an inventor is not on a fundamental level in the sense that pure science is. What it is, is a sort of ingenuity in bringing together separate pieces of mechanical and other information and applying them to a particular problem. The information is sometimes quite prosaic facts about our locality of the universe. The inventor shows us how, when these are put in a certain combination, they do a certain job. A special kind of ingenuity and mechanical intuition seems to be the property of the inventor, a talent seemingly very different from what makes the pure scientist.

Now once something has been invented, it still has to be implimented. Very often mechanical drawings do not specify all details and materials, not to mention dimensions, etc. The building of the prototype and then subsequent modification, all this is technology too. Just as the work of the builder in carrying out the architect's blueprints is technology. But again, this I leave aside as purely practical.

Applied science, I am going to suggest to you, is far more like pure science than it is like invention. For what really is applied science? It is the applying of abstract theories to the world. 'Applying' here means deducing from scientific theories, with the help of some statements of fact, consequences that can be tested and applied. Now this kind of deductive exercise is abstract and theoretical and is performed by pure scientists all the time. Why do I assert this: precisely because it is the aim of pure science to explain certain given facts. When a pure scientist is possessed of a theory in order to show that it explains the facts he is working on he has to do the deductions. It would have been no good Kepler proclaiming all planets move in ellipses if he had not had the ability to deduce from this that at certain times the configuration of stars would appear thus, then later thus, later again thus, and so on. These predictions followed from his theory. They were tested against the superb observations of Tycho de Brahe. Had Kepler not attempted the deduction but simply put forward his theory, science might have been held up for a long while until the observations could be shown to be deducible from the theory.

When I say scientific theories are abstract and fundamental, I mean it literally. Concepts like space, mass, force, coordinate system, quantum jump, and so on are abstractions in the highest sense. They are suggestions as to what constitutes the basic structure of the world. Applied science is the attempt to show just how they can do this by actually deducing those descriptions of the phenomena that they do explain.

Now where does technology come into all this? Technology is our tools, invented by the inventor, shown to be possible by the pure scientist, and actually explained by the deductions and calculations of the applied scientist.

Technology, *qua* know-how, *qua* tools, however, cannot be knowledge. A tool is not knowledge. A chisel is not knowledge, nor is a lathe: they are things. Knowing *that* real chisels exist, knowing *how* a chisel can be used, knowing *how* to construct a chisel, *these* may be knowledge, but the chisel itself cannot be so considered. So perhaps those philosophers who have suggested that technology was a 'knowing how' rather than a 'knowing that' were right after all.

To sum up so far: if technology is tools, or what the inventor invents, or what applied scientists do to show how a theory explains, then it has no place in the structure of knowledge. Such a view may sound odd, but it has often been entertained by philosophers. Some have gone so far as to identify all of science with technology; to say that science itself is no more than a tool or an instrument for predicting and controlling nature. It follows from their view that this tool can make no claims to be knowledge.

One of the most famous occasions when this argument was used was during the Inquisition's hearings on the Galileo case. Galileo was claiming that Copernicus was quite right: the earth *did* move around the sun and not *vice versa,* and he had many sophisticated arguments to back up his case. This was contrary to Biblical teaching and therefore placed Galileo in some jeopardy. Cardinal Bellarmino proposed a rather ingenious solution to the impasse. Bellarmino urged Galileo to concede that what he meant was that the assumption that the earth moved greatly simplified astronomical calculations and should therefore be adopted by all practical astronomers. Bellarmino proposed, if you like, that the heliocentric hypothesis be considered a piece of know-how for making stellar calculations. Bellarmino suggested Galileo should not bring down the wrath of the Inquisition on his head by going further and claiming this useful piece of know-how was also *true*. Like a chisel, it was neither true nor false but useful.

Bishop George Berkeley, whose name is enshrined in that center of anti-establishment protest, the University of California at Berkeley (although I don't know how his name came to get mispronounced), revived Bellarmino's argument in the eighteenth century when he was confronted with a serious problem, again with religious roots. A devout Bishop of the Church of England, he saw what he thought was a wave of religious disbelief sweeping the land, basing its claims on science and especially Newtonian science. This was the entire truth about the world, it was proclaimed; religious teaching was ignored. Many are those clergy who have been outraged at this use of science as a weapon with which to beat religion. Berkeley was cleverer than most, however, and some of the arguments he devised to prick Newton's bubble were strong. But most important, his overall position was that Newton's theories were a very useful and powerful predictive tool: but they were no more than that. To claim that man was discovering

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in science true knowledge was blasphemy and *hubris*. Mathematical tricks or knacks such as the equations of Newton should not, he argued, be accorded the status of truths, any more than should a chisel be awarded such status. Truth was the business of religion and religious teaching. Thus did the establishment Bishop legitimize his role.

One awkward consequence of identifying science and technology, as Bellarmino (and Berkeley) did, is that technology is a tool and thus seems not to make knowledge claims. Two solutions to this are available. Bishop Berkeley simply denied that science-technology was knowledge in any sense. It was to be found elsewhere. The other move is that of pragmatism: knowledge simply means: what works. Knowledge here is completely identified with know-how. And knowing *that* is simply dismissed as a philosophical smoke-screen. The only way you *can* know that you know *that* something is by trying it out, by making it work. So what counts is what works, know-how.

The view that technology=science=not making knowledge-claims, strikes me as both dangerous and as having some truth in it. The view is dangerous because of the stress in technology on effectiveness. And as we have already seen, effectiveness is by no means coincident with truth. But when we compare the celestial mechanics of Newton and Einstein, the results differ so minutely in so few cases, and the equations of relativity are so much more involved, one wonders whether or not if they were judged by their effectiveness Newton would not still be accepted uncritically. Here lies the danger of pragmatism, that we can go on with a theory because it works, making adjustments here and there and blinding ourselves to the possibility that it is just false and needs to be replaced by a theory in better accord with the facts. Merging technology and science, I would suggest to you, could actually inhibit scientific progress since it would allow only doubts about effectiveness but not doubts about the overall truth of the theory. The grain of truth which I said could be found in the identification of science with technology

I will come to at the end. For the moment I think ✓ we can separate science from technology by saying the following: the laws of science lay out the boundaries of what is possible, but within these boundaries there are many contingent variations closely connected with technology. What technology does is to explore and explain the fine detail of the facts of our world. This is to take technology as embracing applied science, invention, engineering, and so on.

When I say that science lays down the boundaries of what is possible, I mean what is physically possible. But what, you may wonder, is physical possibility? Let me illustrate what I mean. We might usefully imagine a set of four concentric circles, each of which represents a greater area of possibility. The outside circle we can call the circle of logic which bounds the area of what is logically possible; that is, what can be said without violating the law of contradiction. This is the area of maximum possibility. Within the circle of logic is the circle of what is mathematically possible. Bertrand Russell's theory that these first two circles coincided turned out to be a mistake.[3] Within the circle of what is mathematically possible (e.g. *n*-dimensional space) is the circle of what is physically possible, and here we find the fundamental laws of science. The first two circles circumscribe all logically and mathematically possible worlds; the circle of science circumscribes the actual physical world. Inside these three circles is the narrowest circle, the boundaries of what we can imagine as possible, what we can visualize with our mind's eye. You might be surprised at my suggestion that what we can imagine is smaller than what is, especially as our notions of what is, our scientific theories, are products of our imaginations. All I want to say is that what any one of us can imagine hardly encompasses all the marvels of nature there actually are: truth *is,* I would say, stranger than fiction. But since science is a product of our imagination, and since sometimes we imagine impossible states of affairs we had better make these last two circles overlap, rather than encapsulate one in the other.

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[3] Russell's theory led him to write **Principia Mathematica**, but it later transpired that not all of mathematics could be so derived.

Now while science sets the laws of the physical world, these are quite general laws. Technology, however, is quite specific. Even on the surface of the earth what is good technology in one place is not in another. Technology is what we might call 'environment-specific.' The technology of house-building in Greenland, Tokyo and Arizona is quite different because of the different environments. If you consider some of the basic problems technology constantly grapples with, such as food, shelter and transportation, you will see how the demands that are made on technology and the kinds of solutions it suggests are environment-specific. What is suitable food in Greenland may go bad in hours in Arizona; what transports man efficiently over Greenland snow, may get him nowhere in Arizona. What will shelter a man in Arizona will not shelter him in a jet airplane, or on the moon. What technology knows is, within the general laws of nature, how to solve these problems of feeding, housing and sheltering in different parts of the universe. Physics places no barrier to space-travel: but our technology is only slowly getting to a point where it can solve all the environment-specific problems of the space environment. Our know-how is only slowly beginning to catch up to this task.

So when I say that technology fills in the fine detail within the framework set by the laws of nature I mean it this way. Technological knowledge is knowledge within the boundary of the circle I have described which coincides with the laws of science. What technology handles within that boundary are the practical problems set it by the society.[4] Whereas science in a way puts the question to nature; technology puts the question both to society and to nature. When a physicist seeks the relationship between mass and energy he does not ask society what it wants the outcome to be. But in technology it is not as simple as that. Ask a traffic engineer to solve the problem of traffic congestion in a city and he will counter-question: 'how far are you prepared to go, how much can you spend?' The asker may be a politician who needs votes and who says, 'don't ask me to ban cars and don't ask me to raise taxes more than a percent or two.' Within that limit the engineer goes to work. We all know traffic is eased if you ban cars. Few of us knew that one-way street systems, banning turns, sychronising chains of stop lights, isolating pedestrians, building flyovers and bypasses could do this until the traffic engineers taught us it was so. They have increased our knowledge, but it is not knowledge of the deepest, in the metaphysical sense of deep, kind. Let me add that this 'metaphysical sense of 'deep,' carries as far as I am concerned no snobbish ovetones. It is not necessarily more difficult, or more worthwhile knowledge: it is simply not knowledge about the structure of the world.

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[4] For a brief discussion of this see my "The Social Character of Technological Problems," Technology and Culture, vol. 7, 1966, pp. 384-390.

Much of what counts as a problem in technology will depend on the society. The technology of clean air, auto-safety, eliminating poverty and avoiding depressions in the economy and the individual were not problems which actively engaged our society 100 years ago. Now the society has decided they are problems and must be tackled. In this development it seems that science must lead the way and suggest what is possible. To a primitive with a magical attitude to custom and taboo, to a social philosopher who sees society as an organism we dare not tamper with, social technology hardly arises. They have to change their metaphysics first. But even with a metaphysics that allows that we can intervene in our environment, specific theories of how the environment works may block progress. To a laissez-faire economist the idea that depressions could be controlled was unknown: he believed in the self-righting tendency of the economy, given time. Keynes' work was galvanized because the Great Depression, far from righting itself, went on worsening; eventually he was able to explain this by means of a new theory about the structure and working of the economy, and to show how to apply that knowledge to the practical situation. However, even if the environment is not considered sacred, intervention can have undesirable consequences. The slaughter of the Buffalo affected the Red Indians in terrible and unintended ways; some of the consequences of the widespread use of insecticides and detergents are coming to light. These pose new technological tasks, requiring further intervention with further undesirable consequences. Our tendency to raise our standards, to demand better and better performance of our technology, includes the demand to minimize undesirable side-effects. The facts that pretty well all tampering with the environment will have these undesirable effects, and that only further teampering will alleviate them, ensure that technological problems must grow at an ever-increasing rate.

Society sets the limits on the kinds of solutions that can be seriously entertained, and closely scrutinizes those that are tried. There seems to be an inescapably social element in technology. Science only sets the outer limits to the problems that can be tackled in that, e.g. it tells us that no good will be served by the society asking the technologist to make a perpetual motion machine.

Before I come to my final point, I would like to expatiate briefly on the fact that technology is not widely studied and admired by intellectuals. This is I think because of the identification of science with technology and the identification of technology with grubbing around in the workshop. There is a snobbery about the workshop which is at least as old as the Ancient Greeks, and which can be found earlier and even more nakedly expressed in China. One can perhaps understand the desire not to dirty those long tapering hands, and it is easy nowadays to confuse an experimental laboratory with a workshop, since in many ways it is one. What is confused is the identification of technology with dirty hands. Every emperor of China who made reforms or legislation was a technologist; Plato's *Republic* was a technological thought-experiment; the groves a academe themselves are a product of a medieval experiment in self-help education.

That this obvious point has not been taken for granted is perhaps explained by the superficial identification of technology with machines. In turn this may perhaps be explained by the impact on man of push-pull physics and its embodiment in the Industrial Revolution, or the Age of Machinery. This was an historical break-point, making such extraordinary wealth possible that man's life was to be transformed. However, it also blinded everyone to the continuity of this development with other kinds of attempts to change the environment. It is especially important to gain this perspective now because the age of machines is rapidly drawing to a close. Marshall McLuhan's semi-serious ideas at least point this out clearly and excitingly: the electronic age has begun.[5] I would add that the bio-chemical ages, not to mention the thermo-physical ages, are near at hand. Our technological breakthroughs now get consolidated and implimented at an accelerating rate, and our curricula will find it hard to keep up as long as they are machine-oriented.

And this brings me to a point I left aside previously. You remember that I said the identification of science with technology had a grain of truth in it? That is what I now want to explain. To begin with I must take you back to the argument that a tool, like a chisel, cannot be knowledge. Is this really true? I would suggest that we may be being mislead by a word. Certainly a tool like a chisel is not, in addition to being a thing, a piece of knowledge. What about a piece of knowledge, though, isn't it a thing, and can't it also be a tool? '$E=mc^2$' is a piece of knowledge, a theory or an equation, if you like. Is it not also a tool? Did we not use this piece of knowledge to plan and build and calculate the effect of the atomic bomb? Isn't a tool simply something man uses to increase his power over the environment? Isn't in this sense the whole of scientific and even intellectual endeavor an outgrowth of our attempts to cope with our environment by learning about it?[6] My own teacher Sir Karl Popper, in a beautiful lecture, has suggested this view. Placing us firmly in the struggle for survival in a hostile environment, he sees language and the quest for understanding as superb adapting mechanisms, no longer blind and chance-like like mutations, but controlled and intelligent.[7]

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[5] Marshall McLuhan, Understanding Media, New York 1964.

[6] See my "Is Technology Unnatural?" The Listener, March 9th, 1967, vol. lxxvii, pp. 322-3 and 333.

[7] K. R. Popper, Of Clouds and Clocks, St. Louis (Washington U.) 1966.

Technology for me, then, is coterminus with our attempts to come to terms with our world; that is, our culture and our society; and as such it contains within it both pure tools and all knowledge.

Dimensions for Exploration Series

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DIVISION OF INDUSTRIAL ARTS & TECHNOLOGY
STATE UNIVERSITY COLLEGE
OSWEGO, NEW YORK

VT 006 653
Wolff, Michael F.
Technology and the Curriculum. Dimension for Exploration.

State Univ. of New York, Oswego. Coll. at Oswego
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 68 21p.

*TECHNOLOGICAL ADVANCEMENT; *CURRICULUM DEVELOPMENT; *TECHNICAL EDUCATION; *INDUSTRIAL ARTS; *ENGINEERING EDUCATION; TECHNOLOGY

Technology is a discipline whose aims and methods are different from those of science. The principle aim of science is the pursuit of knowledge, while technology seeks to use nature to achieve specific practical ends. Some areas of technological development which should influence curriculum are: (1) transportation systems which consist of a vehicle support system, a guidance system, and a propulsion system, (2) communication systems involving information, a transmitter, a medium, and a receiver, (3) energy systems involving generation, transmission, and distribution, and (4) manufacturing systems involving computers for automated design, extensive planning and production control. Some of the curriculum development projects based on such recent technological developments are the Engineering Concepts Curriculum Project of the Commission on Engineering Education for high schools, and a Dartmouth College sophomore course in which "student companies" are set up to define an engineering problem and then research, analyze, design, build, and test a prototype solution to the problem. Any such technological course must involve meaningful interaction with the humanism of philosophy, religion, art, and literature in such a way as not to bury our individuality and deprive us of our human freedom. (EM)

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Dimensions for Exploration

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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TECHNOLOGY
AND THE CURRICULUM

VT006653

CURRICULUM: Structures To Reflect Technology

TECHNOLOGY
AND THE CURRICULUM

About the Author:

MICHAEL F. WOLFF is an associate editor for the *International Science and Technology*, an interdisciplinary monthly magazine for professional scientists and engineers. He received his B.S. in physics from the University of Michigan and a master's in applied physics from Adelphi University. His professional work includes writing and editing articles in the fields of electronics and physics and a recent survey on new developments in science education for children. Mr. Wolff is a member of the Institute of Electrical and Electronics Engineers and the American Physical Society.

I am honored to be here today and speaking to you about Technology and the Curriculum, particularly in as much as I am a direct participant in neither of these enterprises. Rather, as a result of my fortunate association with International Science and Technology magazine, I am an observer — a spectator at one of the great games of our time: the headlong rush toward scientific and technological innovation that is proceeding so fast that many of the developments I reported on only 3 or 4 years ago are already well out of date.

So today I want to give you one reporter's view from the pressbox, if you will, of some of the things that will shape our world during the remaining 33 years of this century. Then with the ease that befits the outsider, I will presume to suggest what effect these changes should have on the curriculum. First I should make clear that I am discussing technology. This is a discipline whose aims and methods are far different from those of science. And by science I include the applied science with which technology so often overlaps and is, as a result, confused. While the pursuit of knowledge for its own sake is the principal aim of science, the aim of technology is to make use of the way Nature is to achieve specific practical ends. As Mario Bunge has written, 'whereas scientific prediction says what will happen under certain circumstances, the technological forecast — which is such an integral part of the true technologist's profession — concerns itself with how circumstances may be influenced so as to achieve specific predetermined ends.' Thus, whereas the study of the motion of electrons in solids is applied science, the tailoring of silicon so as to achieve maximum electron mobility is technology. In the first case we are concerned with extending the knowledge given to us by pure science — in the latter we are concerned with using it to build devices. Since these devices will be used by people — in this case to build computers — we are immediately confronted with the social consequences that are the hallmark of every technological activity. While the scientist can make his discoveries with little concern for how they will be utilized, the technologist works in the day-to-day world of man and machine as he sets about to answer the question he is continually putting to himself; "Here is how things could be — what do I have to do to bring them about?"

What then is technology in the process of bringing about today, not necessarily by any grand premeditated design, but simply by the inexorable thrust of the most powerful industrial enterprise the world has ever known? It is, as you are all well aware, an urban America — a nation that 33 years from now will have 3/4 of its 240 million population living on about 10% of the land. According to a recent study by the Urban Land Institute, most of this group — some 60% of the total population — will cluster into three gigantic urban regions. There will be a 600-mile belt along the California coast, a densely populated region of 14 million people in Florida, and a great swath of people extending from the East Coast to the Great Lakes and embracing the Atlantic seaboard from Maine south to Virginia via the Hudson River Valley and undoubtedly passing through the serene town of Oswego, New York. This same process of urbanization will proceed in other parts of the world, particularly those that are already industrialized. It will someday follow us to the Poles, to the Moon, or to any other inhospitable place mankind may take itself. It is the dominant technological theme of our time. It is a theme of change and uncertainty. It is the theme to which I believe our children must be educated.

I will return to education in a few moments. Now that I have set something of a stage, let me skim briefly over some of the many technologies that will play a part in shaping this urban world. They include some of man's oldest as well as some of his newest. Among them are transportation, communications, and the processing of energy, materials and information.

Let me begin with transportation. Our densely packed urban world is already forcing us to develop new modes of transportation, particularly for traveling over distances of less than 600 miles. While we are well stocked with air transport systems for long distances, and will be especially so when the SST is built, the disparities between inflight times and airport access times are appalling, as any traveler knows. This, coupled with the increased awareness of the dangers of pollution from present combustion engines and the economic losses produced by overcrowding in the central cities, is already starting a widespread effort to develop new ways to travel. Howard Ross described some of these in a recent issue of our magazine. As he pointed out, any transportation system can be looked upon as a product of three elements — the vehicle's support system, its guidance system, and its propulsion system. It is by a process of innovation within these separate areas as well as in the ways they are combined that new transportation systems will evolve. Take the railroad train for example: it needn't always be propelled by electric motors, supported by flanged wheels and guided on rails. It could be propelled by linear induction motors or propellors on the rear, and supported on an air cushion as it travels over special concrete guideways. Indeed, research is underway on this concept both here and abroad. While many formidable engineering problems exist, I would guess that such systems *will* eventually come into being. Ultimately, however, magnetic suspension systems with cryogenically cooled rails might be realizable, as well as the exotic concept of air cushioned vehicles propelled at several hundred mph through underground tubes.

Such "trains" will serve us well for traveling between 150 and 200 mph at distances of a few hundred miles. But what about vehicles for traveling a few miles in the heart of our big urban areas — vehicles to replace our present cars, buses, and subways. Here work is beginning on electric cars powered by storage batteries, and hybrid electric cars that would use conventional engines for long distances and batteries for short distances. There are also various kinds of small-car systems in which manually controlled electric cars could be switched into an automatic mode when entering onto freeways where they would be guided electronically under the control of computers.

But the area for which no solution seems in sight is the area of moving pedestrians efficiently in central business districts. Moving sidewalks and the like have had only limited utility. Something that will provide safe transport for a heavy continuous flow of people is necessary. One example of the kind of thinking that is going on is an ingenious escalator system proposed at Institut Battelle in Geneva, Switzerland. They propose several parallel escalators that would carry as many as 600 passengers per minute down to an underground level. When the level is reached each step would begin to move sideways in a direction perpendicular to the direction of boarding. At the destination the procedure would be reversed and the passengers could step off as they would from an escalator. This device could conceivably be integrated with a parallel endless belt transporter or a train moving at the same speed. It is believed capable of transforming existing city subway systems into continuous transport systems able to carry 8 to 10 times more passengers than they do now. Whether or not this will ever be feasible I think it represents the sort of innovative thinking which future transportation engineers will have to be capable of. Indeed it seems to me no more fanciful than hydrofoil and vertical takeoff craft. Yet these are already being used and in coming years will play an increasingly important role in transporting people.

Closely interacting with these future transportation systems will be the systems of communication. Basically a communication system is quite simple: there is the written or spoken information to be transmitted, there must be some sort of transmitter — be it a newspaper, a radio or a laser — there is the medium over which the message travels, and there is the receiver. However, in its many practical variations there is a diversity that will become even richer and broader in the future. By the year 2000 the continents will be linked by communications satellites as well as by new kinds of cable having much greater capacity than at present. There may be as much communication of data between machines as there is now voice communication between people, and some of this communication will be over light waves with the aid of lasers. There will be great progress in the electronic transmission of facsimiles. Elements of such systems have already appeared as, for instance, in one system that transmits via ordinary telephone lines. Along with closed circuit tv and video tape recording, such systems will have as profound an influence in the classroom as they will have in the business office.

However, the upshot of this will be to compound the information explosion which is already making the allied problem of information storage and retrieval so serious. Right now this field is involved in a great debate: should all knowledge be stored in a central national file or should a series of files containing smaller universes of knowledge be linked in a network? Networks of information and documentation centers are already being established by several government agencies. Techniques are being developed that will allow you to "browse" through the files via a computer link and cathode-ray tube screen, obtaining, finally, references to specific documents that may help you in your search for, say, reports on optical communications. Having found your report it will then be possible to request so-called microfiches. These are transparent 4 x 6-inch cards that hold tiny images of the pages of the original document and are viewed through an enlarger. Microfiches can be transmitted via a tv monitor or else you may choose to store a small library at your desk.

I think you can see the implications of all the advances in optics and electronics associated with these developments for the technology of printing. Indeed this venerable art is already feeling the winds of change. Computers have entered the composing room and, in conjunction with new electro-optical film processing systems, will mean faster and more accurate printing in the years to come. For example, the U.S. Government Printing Office — the world's largest printing plant — is slated to take delivery soon on a computer controlled photocomposition system. This system will have the capability of setting 1000 characters a second and an 8½ x 11-inch magazine page in about 5 seconds.

Now let me say a little about the processing of energy — specifically the generation, transmission and distribution of electric power. Great changes are in store for the power industry which, at present, is one of the Cinderellas of technology. It is estimated that by the year 2000 at least half the nation's electric power will be generated from nuclear sources. And the annual rate of generation of electricity in the U.S. would be between 6 and 10 trillion kilowatt-hours. This compares with last year's 1¼ trillion kilowatt-hours. This means we will have to build the equivalent of roughly 7 power systems of the size of those now in place. These systems will be highly sophisticated by the standards of the 1950's. Larger blocks of power will be traveling over much longer distances and at much higher voltage levels. While most of it will probably continue to be ac, dc is in the process of making what is technologically speaking an exciting comeback. With the development of ac-to-dc convertors capable of operating above 150 kilovolts, it is now practical to use dc for the uninterrupted transmission of power over distances of hundreds of miles. For instance when the Pacific Intertie that is presently under construction is completed in 1971 it will carry 2700 megawatts at 800 Kv between the Columbia River and the Pacific Southwest. The day will undoubtedly come when such links will span all the continents of the world.

At that time even more exotic methods of power transmission may have found their niche too. For instance there is the intriguing prospect of sending large quantities of power over superconducting cable. And even the old dream of wireless power transmission may come true for certain specialized applications. In recent years such great strides have been made in the technology for generating and transmitting microwave power that it is conceivable that someday we might transmit power to hovering spacecraft this way. But the most significant impact on the transmission and distribution of power will in my opinion be made by computers. These now allow individual plants to start up, shut down and operate automatically. But computer control is also in the process of being extended to link companies within so-called pools, of which there are roughly 25 in the U.S. If this trend continues we will see pools interconnecting with other pools into a vast national power grid. The task of planning, designing and operating such power systems economically and reliably is a staggering one. It will take us to the forefront of present computer and systems analysis techniques.

Computers will also play an increasingly vital role in the way we process materials. I am sure many of you are familiar with the Bull of the Woods — that wonderful old-time foreman of the comics. Well, shrewd and experienced as he is, it is a fact of life that technological progress in the factory is beginning to put him out of business. Today a new breed of man is entering the factory gates. This chap is likely to be a physicist, chemist or engineer, particularly a computer scientist or process engineer. He is likely to understand something of the relationship between the properties of a material and its atomic structure and how this structure is controlled by its chemical composition and previous treatment. As a result, he is bringing a more systematic approach to bear on the processes of manufacturing — the ways we cut metal, treat surfaces, shape things, etc. Thus, we now have machining techniques that will handle metals which are stronger than the traditional cutting tools themselves. These include thermal techniques using electric spark discharges, electron beams and lasers; techniques for dissolving metal by chemical action; electrochemical processes for removing metals; and processes like ultrasonic machining that remove material by erosion or by the abrasive impact of other materials. We can drill holes with electron beams and lasers, we can form metals with tremendously high magnetic fields, we can detect otherwise invisible faults with infrared radiation, and so on. And by using numerical control we are getting greatly increased productivity and flexibility from our machine tools.

But, again, even more striking changes in manufacturing will come about through the advent of the computer. I am not talking solely about the use of computers to automate some overall process like you will find in, say, the chemical or petroleum industry. And I am not talking about their increasingly widespread and important use in ordering and billing. Rather, I am talking about the use of computers and automated information handling techniques to optimize the traditional manufacturing operation by coordinating the actions of the men, machines, and materials that comprise it. There are experiments underway at some of our largest companies, here and abroad, to design factory information systems that will take data directly from the assembly line and feed it to the supervisor in such a way that he is kept abreast of the exact status of all operations in the shop as well as those that may be required for a reasonable time in the future. Thus, when Molly Doaks' laser welder breaks down she may reach for a simple transmitting device, perhaps something like a telephone card dialer, identify her particular job and then dial this information into the system. The foreman will receive this and, with the help of the computer, figure how his schedules should be readjusted to meet this contingency. Finally he'll send a teletypewriter message back to Molly saying "switch to job 6 on welder 3."

Apart from the design of hardware for such tasks, many fundamental problems need resolving before we can optimize our manufacturing systems. A good deal of work on the mathematics of decision theory, linear programming and the like is required. There is, however, another side to manufacturing that is changing dramatically. This is the design side, where the engineer tells the plant what to make. In the past this was done via blueprints and hefty bundles of documents. Now it is beginning to be done with computers. Through the process known as automated design, computers are beginning to do the dog work of optimizing the configuration of mechanical structures, laying out electronic circuits, and even of designing other computers. Engineers at remote locations can sketch a circuit on an oscilloscope face with a light pen, see its waveshape, then modify the circuit by, say, adding a capacitor, and then observe the new waveshape. But this is just the most elementary level, where the computer is merely predicting the behavior of trial designs on the basis of an analysis it has made. Research is going on into design *synthesis* techniques where computers will be able to go beyond this and evaluate designs against specified constraints and continually modify them until an optimum design is found. These techniques, which are already finding applications in such tasks as designing complex trusses and minimum-weight structures, will radically affect the way engineering and manufacturing are done. They ought to yield much more productive as well as creative work. But at the same time they will require greater mathematical and conceptual skills on the part of the people who would use them.

Well what started out as a survey of some of the new directions in technology has ended by being mostly about computers. This is intentional. It reflects my agreement with those many people who say that the advent of the computer and the associated ability to process information rapidly, powerfully, and in new ways will be the most important single technological factor in the urbanized world of the 21st century. Progress in all the fields I have mentioned would be either impossible or greatly inhibited without computers. Moreover, computer technology will impinge on nearly every other aspect of our life. For instance, tremendous efforts must be exerted within the next 30 or 40 years if we are to solve our greatest problem — the problem of feeding ourselves. This will mean doing a lot more than we have been doing in bringing technology into agriculture — new kinds of fertilizer, more sources of protein and so on are needed. Computers could play an important part in this industry by calculating optimum marketing and land management strategies. Indeed some computer centers are already being established to work on just such problems.

The automated design I just spoke about can be performed from remote locations because techniques trusses and minimum-weight structures, will radically such as time sharing have been developed. These make it possible for many people to have access to a computer via telephone lines and work on the computer simultaneously. This will bring the largest machines and program libraries within reach of scientific researchers, business men and even teachers and students in the classroom and library. The computer will thus invade everyy aspect of our society — industrial, business, banking, medicine, education, agriculture, and so on. It will be the glue that will hold together our complex urban systems and allow them to function. Our present elementary-school population can expect to spend most of their working lives in the 21st century. It is difficult to see how they will be able to function in any technological role without an understanding of computers. This means the kind of understanding that will come from growing up with computers and learning to use them as routine tools, not from simply reading about them. So I come to the second part of my talk: how do we educate these people — specifically those who might come at it through an industrial arts curriculum?

This computerized world will have one very significant characteristic that will very much influence how one teaches about it. It will be, like the present world, a world of change. It will be a world where the rapid rate of technical progress will make any attempt to lecture on the details of a particular subject futile. I think the guideposts to this kind of teaching have already been erected by the people who initiated the present curriculum reform movement in high school science and math. I am sure you're familiar with the PSSC physics, the Chem Study chemistry, and so on. What the writers of these courses did was to try and get away from the picture the traditional texts gave of science as a static body of knowledge whose mastery would supposedly be all you would need for a career in the field. These people — mostly professional scientists and mathematicians — have tried to replace these texts with texts that portray science as an unfinished and continuing process of inquiry into nature. Moreover the emphasis is on understanding basic concepts rather than on attempting broad surveys of so-called facts. And, perhaps most important, there is heavy stress on performing actual experiments in the laboratory — on doing science rather than reading about it.

Now in a way it may be easier to design a physics course that looks at basic concepts than to design a technology-oriented course. The latter does need to get onto a practical plane at some time or other. And yet, it is quite certain that if I design a sequence that teaches the guts of present pulsed power ruby lasers, I will have to revamp it a yeyar or two from now when flowing-gas cw lasers become important. Similarly in printing, transportation or any other field — the nearer you get to technology the faster things get out of date. Hence we must find a way to stress concepts.

Well, there have been various attempts to produce new technology-oriented courses and I want to tell about some of these now. I'll describe one from high school and one from college — courses which I think provide helpful clues as to how one might go about teaching technology.

The high school course is called the Engineering Concepts Curriculum Project. It is being developed by the Commission on Engineering Education and is presently being tried out in 27 schools. Its other title — Man Made World — is perhaps more descriptive of the course's aim, which is to acquaint those students who would not normally take science with the technological underpinnings of their modern world. The strategy of Man Made World is to teach technical *concepts* in a substantive rather than descriptive way and in the framework of their relevance to society — the student's own world.

The writers of this course have reported that this turned out to be far more difficult than they had first expected. Normally you teach basic principles and then you lead up to how they apply to a complex situation. But it was felt that this would not hold the interest of the general student, who is not highly motivated to dig into the general principles of science. So Man Made World tries to start with the observable world and proceed back to the principles. For example, in the usual way of teaching Newton's laws, friction and drag (which are not accounted for in $f=ma$) are ignored. Only the idealized situation is considered in any depth. The Man Made World, on the other hand, begins by indicating the importance of drag and friction to the performance of vehicles and then brings in $f=ma$ when considering acceleration and deceleration.

The course deals in fundamental concepts, trying to avoid text materials that would turn it into a vocational program. The present version begins with logic and computing. This section is intended to develop an understanding of how computers extend man's mental powers and provide the basis for automation. It introduces the student to logic circuits and programming, and it covers the basic facets of computer action including the encoding of information, storage, computing, memory, and input and output.

The next section deals with the important concept of a model and how it is used for analysis and prediction in engineering. The students use simple analog computers to see how functional models are applied to the solution of real problems, and they also see how modeling comes into social and biological areas as well by modeling such things as population growth and the spread of epidemics. Such concepts as data collection, sensing and measurement come in here. In studying them, the student is led from a broad system to the devices used to build the system, and thence to the physical principles behind the device. For instance he will learn about transducers which convert pressure to electric current, and then go to Ohm's law and electrodynamics.

The last section at present deals with energy. It includes such vital engineering concepts as (1) amplification, (2) feedback, and (3) stability. Stability is presented as the property that enables a system to maintain its equilibrium under conditions of disturbance.

Now the idea of a system itself and the disciplines by which we analyze a system is perhaps one of the most important contributions of modern technology. While the systems approach has become such an overworked term that it is quite laughable in some of its uses, it is a fact that by shifting our concern from the components themselves to the context in which these components are used, the systems approach is a powerful one. It will play an increasingly important role in the design of large social systems such as cities as well as in smaller systems like manufacturing plants and communication links.

As you may have guessed the lab is an important part of Man Made World. The students build devices that actually perform functions discussed in the text. For instance navigation concepts are followed up by using a sheet metal sonar set to measure the dimensions of the room. Electric circuits are taught through the aid of logic-circuit boards and a cardboard device that simulates basic computer action.

Now let me tell you about a college course which gives its students a different kind of personal experience with their subject matter. This is a first course for prospective engineering students at Dartmouth College. It is a 10-week course in the first term of the sophomore year and the students work about 17 hours a week. An engineering curriculum is obviously different from a science curriculum. Engineers *design* things. Moreover these things don't just have to work — they have to be economically viable solutions to problems of the real world. This Dartmouth course gives the student an opportunity to get out of the lecture hall, find a problem that needs to be solved, and solve it. The students are organized into companies and then given a free rein in both the organization of the company and in the way they will approach the problem. They define it, determine the state of the art, analyze, design, build and test a prototype, and determine whether or not it is economically feasible.

One semester the students were taken to a camp for crippled children and told that they had 10 weeks to decide upon something which ought to be built to help the youngsters. One company — Dartmouth Devices Amalgamated — designed a unique electromechanical system that "converts English typed on a standard typewriter to good quality grade 2 Braille at a speed of 40 to 50 words a minute for an approximate total production cost of $662.50, labor included." In other years reports were filed on such things as a curb climbing wheel chair, a heated wet suit system and a reliable homing device for aquanauts on the continental shelf.

I think these courses suggest ways in which we can teach for tomorrow — ways in which we can teach courses that stress concepts within a framework of computer technology and systems analysis while at the same time providing maximum opportunity to get one's hands on the actual stuff of technology. There is nothing radically new about this idea of personal involvement — it is only that it is often neglected. But when it is not, the results can be most gratifying. There's a story about a school in what is now the Watts area of Los Angeles. During the 1930's they had a photography course — there wasn't any fancy equipment — just a teacher who let his kids wander all over the school taking pictures of anything and everything. It was probably the most thoroughly photographed school in the world. Today I am told several of those students are photographers on Life magazine.

In conclusion let me say that the final requirement as I see it is that no technological course be taught in a vacuum. There must be a meaningful interaction with the humanism of philosophy, religion, art and literature. For the real challenge of our technological world will not be to build it. It will be built somehow. The real challenge will be to build it in such a way that it does not bury our individuality and deprive us of our human freedoms. And that is the challenge that confronts *all* educators today, technical as well as non-technical.

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VT 006 687
Gatlin, Sammie Carol; Johnson, Mildred B.
A Study of Problems Recognized by Vocational Home Economics Teachers. Research Series in Occupational Education No. 9.

North Carolina Research Coordinating Unit in Occupational Education, Raleigh
North Carolina Univ., Greensboro. Dept. of Home Economics
North Carolina State Univ., Raleigh. School of Education
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*HOME ECONOMICS EDUCATION; TEACHER EDUCATION; *EDUCATIONAL PROBLEMS; TEACHER EXPERIENCE; TEACHER ATTITUDES; *HOME ECONOMICS TEACHERS; TEACHER CHARACTERISTICS; SURVEYS; HIGH SCHOOLS; QUESTIONNAIRES
NORTH CAROLINA

A study was designed to identify the problems recognized by 100 North Carolina secondary vocational home economics teachers with varying amounts of teaching experience. An 80-item questionnaire sought information about working with learners, development of curriculum, management of time and other resources, personal adjustment, professional orientation, and the teacher and the school. In the sampled population the average teacher had 8.76 years of teaching experience and taught 4.75 classes per day with 18.5 students per class. Findings showed that over half of the teachers agreed on 33 of 67 problem areas. There was a significant relationship between problems reported and the amount of teaching experience. Major concerns of the majority were: time management, the development of concepts and generalizations, lack of opportunity for field trips, and the need for effective techniques to adapt materials for slow learners. Other concerns were handling supervised home economics, scheduling conferences, planning adult classes, handling extra-curricular activities, public relations, and keeping resource files organized and up to date. Implications, which are grouped into the three categories of teacher education programs, home economics supervisors, and further study may provide a frame of reference for teacher education programs. The questionnaire and related letters are included in the document. (FP)

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A STUDY OF PROBLEMS RECOGNIZED BY VOCATIONAL HOME ECONOMICS TEACHERS

By
SAMMIE CAROL GATLIN
and
MILDRED B. JOHNSON

RESEARCH SERIES IN OCCUPATIONAL EDUCATION

NORTH CAROLINA RESEARCH COORDINATING UNIT IN OCCUPATIONAL EDUCATION
In Cooperation With
DEPARTMENT OF HOME ECONOMICS EDUCATION
SCHOOL OF HOME ECONOMICS
THE UNIVERSITY OF NORTH CAROLINA AT GREENSBORO

VT006687

SCHOOL OF EDUCATION
NORTH CAROLINA STATE UNIVERSITY AT RALEIGH
RALEIGH, NORTH CAROLINA

A STUDY OF PROBLEMS RECOGNIZED BY VOCATIONAL HOME ECONOMICS TEACHERS

by

Sammie Carol Gatlin
and
Mildred B. Johnson

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Research Series in Occupational Education - No. 9
A report of research conducted by Dr. Mildred B. Johnson and Sammie Carol Gatlin, Department of Home Economics Education, University of North Carolina-Greensboro. Publication and dissemination of research findings is in cooperation with the North Carolina Research Coordinating Unit in Occupational Education.

6687

MEMORANDUM

TO: The ERIC Clearinghouse on Vocational and Technical Education
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FROM: (Person) Joe R. Clary, Director (Agency) N. C. Research Coordinating Unit

(Address) Box 5312, Raleigh, N. C. 27607

DATE: September 6, 1968

RE: (Author, Title, Publisher, Date) A Study of Problems Recognized by Vocational Home Economics Teachers; Gatlin,S.C and Hohnson, M.B.; N.C. State Dept. of Public Instruction and N.C. State U.

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(2) Means Used to Develop Material:
Development Group P
Level of Group P
Method of Design, Testing, and Trial P

(3) Utilization of Material:
Appropriate School Setting High School
Type of Program Vocational Home Economics
Occupational Focus Teaching Home Economics
Geographic Adaptability
Uses of Material Teacher Education & Research
Users of Material Teacher Educators, Supervisors, Researchers

(4) Requirements for Using Material:
Teacher Competency N/A
Student Selection Criteria N/A
Time Allotment N/A

Supplemental Media --
Necessary N/A)
Desirable N/A) (Check Which)

Describe N/A

Source (agency) N/A
(address)

FOREWORD

The North Carolina Research Coordinating Unit in Occupational Education is pleased to have the opportunity of disseminating this report of a recent study by Dr. Mildred B. Johnson and Sammie Carol Gatlin (now Mrs. Darrell Garner), Department of Home Economics Education, University of North Carolina - Greensboro.

We are indeed grateful to Dr. Johnson, Mrs. Garner and the school of Home Economics at the University of North Carolina - Greensboro for allowing us the privilege of disseminating this summary of the study.

This publication and others to follow are a result of the partial fulfillment of the commitment of the North Carolina Research Coordinating Unit to:

(a) Stimulate research in occupational education.
(b) Identify problems for research.
(c) Develop a system by which national, state, and local data may be organized and made available.
(d) Maintain communication between people who are working in occupational education and research workers.
(e) Assist in conducting training programs on activities involved in the research-action continuum.
(f) Provide consultant services in state, local, and area research developmental activities.

Joe R. Clary
Director

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OVERVIEW OF THE STUDY

As a result of rapid change in our present social and economic situation, new problems in teaching are continually being generated. In home economics, as in other fields, new problems demand new solutions. These problems were recognized by McGrath as he said:

> The purposes of home economics have changed through the years, often through the force of external circumstances rather than by internal planning . . . It is apparent that the home economics . . . curriculum can no longer be structured on one pattern or designed to serve one purpose. The most critical problem now facing those involved in home economics education seems to be the lack of a consensus concerning what it ought to be if it is to have an integrity of its own and a program different from the instruction offered by other related departments and schools. The earlier mission of home economics, which was precise and clear, has been obscured by developments within the academic community and outside it in society at large. The forces now playing on home economics education need to be clarified and instructional programs redesigned to serve the new demands which have arisen in recent years.[1]

Ruth Stovall also pursues the concept of education in a world of change:

> The thinking home economics educators today must view these changes in terms of the life relatedness of home economics instruction to pupils, not only in their lives today but also in their roles as homemakers tomorrow in which they will live in relation to even more rapid changes than we are now experiencing. The pupils in our classrooms today will not only be influenced by change

---

[1] Jeanette A. Lee and Paul L. Dressel, Liberal Education and Home Economics (Bureau of Publication, Teachers College, Columbia University: 1963), p. vi.

> but these same pupils will be the adults who will bring about the changes of tomorrow.
>
> . . . .'
>
> It's a new world in a new decade. We have new hopes--new dreams and new problems that call for the right answers.[1]

In a new world in a new decade, problems will be inevitable. Seldom are changes made when new problems are not generated for teachers in all areas. Home economics teachers are no exception. The problem of change lies in one's ability to recognize individual problems and then to seek to find either a solution or an acceptable means of facing the problem. Some problems may be unique to beginning teachers, some to experienced teachers, and yet other problems appear to be general and to persist regardless of experience.

Identification of problems is the first step toward determining solutions to existing problems. This kind of information is needed as a basis for pre-service and in-service education programs. If such programs are to be of maximum benefit, they must be geared to meeting the needs of the teachers.

The Problem

The primary purpose of this study was to identify the problems recognized by North Carolina secondary vocational home economics teachers with different amounts of teaching experience. The study was designed to determine problems in general, problems that persist regardless of the amount of teaching experience, and the kinds of problems recognized by beginning teachers and by experienced teachers. Through an analysis of the findings of this study, information obtained could be of value for pre-service and in-service education of home economics teachers in North Carolina.

---

[1] Ruth Stovall, "Education in A World of Change," Journal of Home Economics, 54 (September, 1962), 537-540.

The hypotheses tested in this study were:

1. There is no relationship between problems recognized by teachers and amount of teaching experience.
2. There are no problems unique to the beginning vocational home economics teacher.

Study Design

In order to collect the data needed for an analysis of the problems recognized by secondary vocational home economics teachers, a questionnaire was developed (Appendix A). Items for the questionnaire were based upon a review of literature concerning problems encountered by teachers. The eighty items on the questionnaire were divided into seven categories involving problems about "working with learners," "development of curriculum," "management of time and other resources," "personal adjustment," "professional orientation," and "about you and your school." Secondary vocational home economics teachers were asked to respond to items by checking one of four columns: (1) does not concern me, (2) problem already solved, (3) somewhat a problem and (4) a difficult problem. Although the respondents were anonymous, personal data was obtained concerning the teachers' current teaching situation.

A random sample of 100 secondary vocational home economics teachers in North Carolina was drawn using a table of random numbers. A list of all vocational home economics teachers in North Carolina published by the Division of Vocational Education of the State Department of Public Instruction, 1965-1966 was used. The questionnaires with an accompanying letter that explained the purpose of the study were mailed to each teacher in the sample (Appendix B). Eighty-one percent of the teachers returned the questionnaires as a result of the initial mailing and two follow-up attempts.

As the questionnaires were returned, responses were tabulated and summarized. The information was analyzed to determine problems recognized by teachers of different experience levels. The teachers were stratified according to the amount of teaching experience they had had: zero to two years, three to six years, seven to ten years, and eleven years and over. On the basis of the summary of sample data, estimates were made describing the kinds of problems that teachers with varying amounts of experience were meeting.

The following data were prepared for presentation of the findings:

1. Responses to open-end items were summarized and means were computed.
2. Total number of responses to each item in the first five categories were converted to percentages.

3. Tables were set up containing the responses of teachers at several levels of teaching experience; 0-2 years, 3-6 years, 7-10 years, and 11 years and over.

4. A chi square value was computed to determine items in which there was a significant relationship in the problems reported by the four experience stratifications.

ANALYSIS OF DATA

The responses to a questionnaire by eighty-one vocational home economics teachers in North Carolina secondary schools provided the data for this study. The teachers checked their reactions to sixty-seven items which were possible problem areas. Personal data were also obtained for each respondent. The analysis of data are presented in relation to the questionnaire information as follows:

1. A description of the teachers in terms of teaching experience, number of classes taught per day, and preparation for teaching was presented.
2. Items checked on the questionnaire were analyzed in relation to problems recognized by teachers as follows:
   a. Problems which over 75 percent of the teachers recognized.
   b. Problems which 50 to 75 percent of the teachers recognized.
   c. Problems which 25 to 50 percent of the teachers recognized.
   d. Problems which less than 25 percent of the teachers recognized.
3. Relationships of problems recognized by teachers with varying amounts of teaching experience were analyzed.

Significant relationships in responses expressed by teachers with varying amounts of teaching experience were determined.

Description of Teachers

All of the teachers in the population from which the sample was drawn were vocational home economics teachers in North Carolina secondary schools. Questionnaire responses were marked anonymously, but personal data were secured from each respondent for comparison among subgroups. The data requested of the teachers concerning their teaching experience in vocational home economics were categorized into four levels: zero to two years, three to six years, seven to ten year, and eleven years and over. The percentages of respondents were:

0 to 2 years experience	22.2 percent
3 to 6 years experience	32.1 percent
7 to 10 years experience	14.8 percent
11 and over years experience	30.9 percent

The mean number of years teaching experience for the respondents was 12.59, and the mean for teaching experience in vocational home economics was 8.76 years. The mean number of classes taught per day was 4.75 with 18.50 students in each class. The percentage of respondents who were both homemaker and teacher was 82.7. The same percentage, 82.7, taught the first year they were out of college. Only 26.0 percent of the teachers were married before they began teaching. Of those teachers responding, 2.5 taught occupational training courses, and 12.3 percent taught introduction to vocations courses. There was a mean of 1.5 teachers in each department. Of those teachers responding, 17.3 percent had a master's degree.

Classification of Responses

The teachers were asked to check their responses to each stated problem in parts I through V of the questionnaire in the column which best indicated their situation (see Appendix A). The columns were: does not concern me (1), problem already solved (2), somewhat a problem (3), and a difficult problem (4). In the analysis of the data, responses in columns 1 and 2 were categorized as no problem; the responses in columns 3 and 4 were categorized as a problem. The discussion which follows will describe the teachers' responses to the five categories of problems: working with learners, development of curriculum, management of time and other resources, personal adjustment and professional orientation.

Problems Recognized by Over 75 Percent of the Teachers

Seven of the sixty-seven items on the questionnaire were considered to be problems by over 75 percent of the teachers who responded (see Table 1). The problem most frequently mentioned was budgeting time to provide for satisfying personal life, checked by 86.4 percent of the teachers. Adjusting to the demand for the teacher's time and energy after school hours was a problem indicated by 81.5 percent of the respondents. Finding time to plan adequately was checked by 79.0 percent. In view of these findings, time management appears to be the greatest problem recognized by vocational home economics teachers in North Carolina secondary schools included in this study.

TABLE I.--Problems recognized by over 75 percent of the respondents

ITEM	Years of Experience				Total Sample
	0-2	3-6	7-10	11 & Up	
Management of time and other resources					
Budgeting time to provide for satisfying personal life	77.8%	88.5%	83.3%	92.0%	86.4%
Adjusting to demand for teacher's time and energy after school hours	83.3	84.6	75.0	80.8	81.5
Finding time to plan adequately	83.3	76.9	91.7	72.0	79.0
Development of curriculum					
Lack of opportunity for field trips	72.7	80.8	91.7	84.0	81.5
Working with learners					
Helping students to develop generalizations	77.8	84.6	91.7	88.0	85.2
Guiding concept formation	66.7	80.0	83.3	76.0	76.5
Adapting materials for slow learners	71.8	65.4	75.0	88.0	76.5

Lack of opportunity for field trips was a problem for 81.5 percent of the respondents. Concepts and generalizations were problem areas for home economics teachers. Guiding concept formation and helping students to develop generalizations were problems reported by 76.5 and 85.2 percent of the teachers respectively. Adapting materials for slow learners was a problem for 76.5 percent of the teachers. It is apparent that problems of working with learners is the next most significant problem area for home economics teachers in North Carolina secondary schools.

Some problems of home economics teachers persist regardless of the amount of teaching experience. The following problems appear to persist among all experience levels: time management, field trips, generalizations, concept formation and slow learners. These problems were reported by 75 to 85 percent of the teachers in this study and were the greatest problems recognized.

Problems Indicated by 50 to 75 Percent of the Teachers

Many of the items on the questionnaire were considered to be problems by 50 to 75 percent of the teachers responding. An additional twenty-six problems were checked by teachers in this percentage grouping. These problems involved working with learners, development of the curriculum and management of time and other resources. It was found that thirty-three of the sixty-seven items on the questionnaire were problems recognized by more than half of the teachers responding.

In the category, "working with learners," the most frequently reported problems were related to home experiences and conferences. Eleven of the twenty problems categorized as "working with learners" were reported to be problems by 50 to 75 percent of the teachers (see Table 2). Of those teachers responding, 66.7 percent recognized problems concerning scheduling conferences with students and helping students conduct supervised home experiences. Helping students evaluate supervised home experiences and also to plan them were problems for 65.4 percent and 59.3 percent of the teachers respectively. From 60 to 65 percent of the teachers recognized the following problems: identifying adult needs related to home economics education; guiding problem-solving; adapting to the needs, interests, and abilities of the students; leading a class to self-evaluate; and arousing and holding student interest and motivation. From 50 to 55 percent had difficulty providing challenge for students with superior ability and encouraging participation in FHA. In comparison with the other three experience groupings, a greater percentage of teachers having eleven or more years teaching experience reported home experiences to be a problem.

TABLE 2.--Problems recognized by 50 to 75 percent of the respondents related to working with learners

ITEM	Years of Experience				Total Sample
	0-2	3-6	7-10	11 & Up	
Working with learners					
Scheduling conferences with students	44.4%	69.2%	50.0%	88.0%	66.7%
Helping students conduct supervised home experiences	50.0	69.2	58.3	80.0	66.7
Helping students evaluate supervised home experiences	55.6	53.8	50.0	92.0	65.4
Identifying adult needs related to home economics education . .	77.8	50.0	58.3	76.0	64.2
Guiding problem-solving	72.2	53.8	66.7	64.0	63.0
Adapting to the needs, interests and abilities of the students	72.2	53.8	66.7	64.0	63.0
Leading a class to self-evaluate	72.2	53.8	41.7	72.0	61.7
Arousing and holding student interest; motivation	72.2	57.7	50.0	64.0	61.7
Helping students plan supervised home experiences	27.8	61.5	50.0	84.0	59.3
Providing challenge for students with superior ability . . .	50.0	46.2	58.3	64.0	54.3
Encouraging participation in FHA	61.1	46.2	50.0	48.0	50.6

In the category, "development of curriculum," the most frequently reported problem was hampering program effectiveness by curricular and extra-curricular activities (see Table 3). This problem was reported by 66.7 percent of the respondents. Nine of the twenty items in this category were recognized as problems by 50 to 75 percent of the teachers.

TABLE 3.--Problems recognized by 50 to 75 percent of the respondents related to development of curriculum

	Years of Experience				Total Sample
	0-2	3-6	7-10	11 & Up	
Curriculum development					
Hampering program effectiveness by curricular and extra-curricular activities . . .	50.0%	61.5%	83.3%	76.0%	66.7%
Planning adult classes	83.3	61.5	50.0	64.0	65.4
Developing a systematic public relations program; interpreting home economics to the community	66.7	73.1	50.0	64.0	65.4
Securing needed school materials and/or equipment	50.0	69.2	75.0	60.0	63.0
Working cooperatively with parents in homes; parental contacts . .	61.1	65.4	58.3	60.0	61.7
Providing variety in learning experiences	50.0	57.7	58.3	64.0	58.0
Making home visits . .	55.6	57.7	58.3	60.0	58.0
Presenting subject matter effectively . .	77.8	42.3	50.0	60.0	56.8
Planning subject matter presentation .	44.4	53.8	41.7	60.0	51.9

Between 60 and 65 percent of the respondents reported the following problems: planning adult classes; developing a systematic public relations program, interpreting home economics to the community; securing needed school materials and/or equipment; working cooperatively with parents in homes and parental contacts. From 50 to 58 percent of the teachers reported these problems: providing variety in learning experiences,; presenting subject matter effectively; making home visits; and planning subject matter presentation. Planning adult classes and presenting subject matter effectively were recognized as problems more often by beginning teachers than by experienced teachers.

In the category, "management of time and other resources," six of the seventeen items were problems recognized by 50 to 75 percent of the respondents (see Table 4). The problems most frequently mentioned were keeping resource files up-to-date and organized which were reported by 70.4 percent and 67.9 percent respectively. Other problems reported by 50 to 75 percent of the teachers were: securing equipment and textbooks, keeping records required by school and state department, teaching space and facilities interfere with learning, and preparation and student activities unrelated to teaching home economics.

TABLE 4.-- Problems recognized by 50 to 75 percent of the respondents related to management of time and other resources

ITEM	Years of Experience				Total Sample
	0-2	3-6	7-10	11 & Up	
Management of time and other resources					
Keeping resource files up-to-date	61.1%	73.1%	58.3%	80.0%	70.4%
Keeping resource files organized	66.7	65.4	58.3	76.0	67.9
Securing equipment and textbooks	44.4	69.2	50.0	68.0	60.5
Keeping records required by school and state department . . .	50.0	61.5	58.3	60.0	58.0
Teaching space and facilities interfere with learning	44.4	50.0	75.0	52.0	53.1
Preparation and student activities unrelated to teaching home economics	33.3	53.8	75.0	48.0	50.6

Problems Indicated by 25 to 50 Percent of the Teachers

Twenty-one of the sixty-seven items on the questionnaire were recognized as problems by 25 to 50 percent of the teachers. Three of the items categorized as "working with learners" were problems reported in this percentage grouping: conducting conferences with students, advising FHA chapter, and keeping class routines running smoothly (see Table 5). Eight of the twenty items categorized "development of curriculum" were problems reported in the 25 to 50

TABLE 5.--Problems recognized by 25 to 50 percent of the respondents related to working with learners and to development of the curriculum

ITEM	Years of Experience				Total Sample
	0-2	3-6	7-10	11 & Up	
Working with learners					
Advising FHA chapter	44.4%	50.0%	41.7%	52.0%	48.1%
Conducting conferences with students	27.8	34.6	41.7	48.0	38.3
Keeping class routines running smoothly . . .	38.9	30.8	16.7	36.0	32.1
Development of curriculum					
Securing group and individual parental cooperation with the school home economics program	44.4	65.4	41.7	36.0	48.1
Gearing home economics program to community customs and practices	27.8	57.7	50.0	48.0	46.9
Organizing curriculum content and sequence	27.8	50.0	33.3	48.0	42.0
Teacher-pupil planning	33.3	38.5	25.0	60.0	42.0
Using current information in home economics	33.3	30.8	41.7	56.0	40.7
Overcoming community reluctance to accept new ideas in teaching	22.2	46.2	66.7	24.0	37.0
Use of school services and personnel	11.1	26.9	58.3	20.0	25.9
Becoming acquainted with the community; understanding social and economics problems in the community . . .	27.8	23.1	8.3	36.0	25.9

percentage grouping. From 40 to 48 percent of the teachers recognized these problems: securing group and individual parental cooperation with the school home economics program, gearing home economics program to community customs and practices, organizing curriculum content and sequence, teacher-pupil planning, and using current information in home economics. From 25 to 37 percent of the respondents reported these problems: overcoming cummunity reluctance to accept new ideas in teaching, use of school services and personnel, and becoming acquainted with the community and understanding social and economic problems in the community.

Of those items categorized as "management of time and other resources", ten of the seventeen problems were indicated as problems for 25 to 50 percent of the teachers (see Table 6). From 42 to 49 percent of the teachers recognized the following problems: department management techniques including planning the year's budget, keeping accounts and department records; including students in planning for department care; determining annual and long-term needs for facilities and equipment; and planning for selection of equipment and facilities. From 25 to 39 percent of the teachers recognized these difficulties: responsibility in too many community activities; including students in department care duties; planning educational activities for summer employment; classes too large for effective learning; managing home room periods; and overload in number of classes so that teaching is impaired. None of the items categorized as "personal adjustment" or "professional orientation" fell into this percentage grouping.

TABLE 6.--Problems recognized by 25 to 50 percent of the respondents concerning management of time and other resources

ITEM	Years of Experience				Total Sample
	0-2	3-6	7-10	11 & Up	
Management of time and other resources					
Department management techniques including planning the year's budget, keeping accounts and department records	38.9%	53.8%	50.0%	52.0%	49.4%
Including students in planning for department care	50.0	42.3	50.0	40.0	44.4
Determining annual and long-term needs for facilities and equipment	33.3	46.2	25.0	56.0	43.2
Planning for selection of equipment and facilities	55.6	34.6	25.0	48.0	42.0
Responsibility in too many community activities	16.7	34.6	83.3	40.0	39.5
Including students in department care duties	38.9	34.6	50.0	36.0	38.3
Planning educational activities for summer employment	38.9	34.6	41.7	32.0	35.8
Classes too large for effective learning . .	33.3	42.3	50.0	24.0	35.8
Managing home room periods	22.2	34.6	8.3	36.0	28.4
Overload in number of classes so that teaching is impaired	16.7	34.6	33.3	20.0	25.9

Problems Recognized by Less than 25 Percent of the Teachers

Thirteen of the sixty-seven items were considered to be problems by less than 25 percent of the teachers (see Table 7). Only three of the twenty items related to working with learners were considered to be problems by less than 25 percent of the teachers. These were: allowing students freedom to express ideas, handling problems of discipline and control, and holding respect of students.

TABLE 7.--Problems recognized by less than 25 percent of the respondents

ITEM	Years of Experience				Total Sample
	0-2	3-6	7-10	11 & Up	
Working with learners					
Allowing students freedom to express ideas	11.1%	15.4%	8.3%	40.0%	21.0%
Handling problems of discipline and control	27.8	7.7	8.3	16.0	14.8
Holding respect of students	0.0	3.8	8.3	4.0	3.7
Development of curriculum					
Understanding and using courses of study and curriculum guides . .	16.7	11.5	16.7	28.0	18.5
Teaching classes for boys and girls	11.1	15.4	16.7	16.9	14.8
Management of time and other resources					
Understanding and using the marking (grading) system . . .	5.6	15.4	8.3	20.0	13.6

TABLE 7.--Continued

ITEM	Years of Experience				Total Sample
	0-2	3-6	7-10	11 & Up	
Personal adjustment					
Communication with administrators	27.8	15.4	25.0	16.0	19.8
Relationships with supervisors	16.7	7.7	16.7	8.0	11.1
Professional orientation					
Determining the teacher's responsibility to the community	38.9	23.1	25.0	16.0	24.7
Active participation in professional organizations	16.7	19.2	16.7	20.0	18.5
Developing desirable personal and professional qualities . . .	16.7	11.5	8.3	32.0	18.5
Comprehension of administrative policies	16.7	7.7	8.3	20.0	13.6
Establishing and maintaining good relationships with school personnel . . .	0.0	0.0	8.3	0.0	1.2

All five of the items under "professional orientation" were problems reported by less than 25 percent of the teachers. From 13 to 24 percent reported the following problems: determining the teacher's responsibility to the community, active participation in professional organizations, developing desirable personal and professional qualities, and comprehension of administrative policies. Only 1.2 percent had difficulty establishing and maintaining good relationships with school personnel.

Significant Relationships Between Teachers with Varying Amounts of Experience and Specific Problems Recognized

The respondents were grouped into four categories according to amount of teaching experience in vocational home economics: zero to two years, three to six years, seven to ten years, and eleven years and over. Responses to each item among teachers in the categories were compared. Column 1, "does not concern me," and Column 2, "problem already solved," were combined for purpose of analysis to indicate that the item was not a problem. Column 3, "somewhat a problem," and Column 4, "a difficult problem," were combined to indicate that the item was a problem.

Chi square tests of independence were utilized to determine significant relationships between the problems reported and years of teaching experience of respondents. Franzblau advises that chi square may be used to consider whether a distribution on a single trait is such as might be attributable to chance alone.[1] When the frequency in any cell is less than five, χ^2 values are distorted. It is common practice to combine categories so as to raise the frequency in question. While χ^2 gives evidence of the presence of an association, it gives no evidence of the meaning of the association.

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[1] Abraham N. Franzblau, A Primer of Statistics For Non-Statisticians, (New York: Harcourt, Brace & World, Inc., 1958), p. 121.

In six of the sixty-seven items, there was a significant relationship between teachers with varying amounts of experience and problems recognized and reported (see Table 8). Four of these six items concerned working with learners.

TABLE 8.--Significant relationships between the number of teachers with varying amounts of experience and problems recognized

ITEM	Years of Experience				χ^2 Values
	0-2	3-6	7-10	11 & Up	
Working with learners					
Helping students plan supervised home experiences	5	16	6	21	14.21*
Helping students evaluate supervised home experiences	10	14	6	23	11.37*
Scheduling conferences with students	8	18	6	22	10.71**
Allowing students freedom to express ideas	2	4	1	10	8.23***
Development of curriculum					
Overcoming community reluctance to accept new ideas in teaching	14	12	8	6	8.93***
Management of time and other resources					
Responsibility in too many community activities	3	9	10	10	13.83*

* χ^2.01 at 3 df = 11.341
** χ^2.02 at 3 df = 9.837
*** χ^2.05 at 3 df = 7.815

The problem of evaluating home experiences and years of teaching experience was highly related. Of those teachers having eleven years and over of teaching experience, 92.0 percent reported helping students evaluate supervised home experiences to be a problem. From 50 to 55 percent of the teachers in the other three experience classifications recognized evaluating home experiences to be a problem.

The problem of scheduling conferences with students was significantly related to years of teaching experience of respondents. Of the teachers with eleven and over years of teaching experience, 88.0 percent reported this to be a problem. In the other classifications, 69.2 percent of the teachers with three to six years teaching experience, 50.0 percent of those with seven to ten years of experience and 44.4 percent of those with less than two years of teaching experience reported conferences to be a problem.

Allowing students freedom to express ideas was a problem significantly related to years of teaching experience. This problem was reported by 40.0 percent of those teachers having eleven and over years of teaching experience. From 8 to 15 percent of the teachers in the other three experience classifications reported this problem.

One of the six items significantly related to years of experience concerned development of curriculum (see Table 8). Of those teachers having seven to ten years of experience, 66.7 percent reported overcoming community reluctance to accept new ideas in teaching to be a problem. From 22 to 46 percent of the teachers in the other three experience classifications reported this problem.

One of the items on management of time and other resources was a problem significantly related to years of teaching experience. Concerning this item, 83.3 percent of the teachers with seven to ten years teaching experience reported responsibility in too many community activities to be a problem. This item was also a problem for 40.0 percent of those teachers with eleven years and over of teaching experience. Only 16.7 percent of the beginning teachers reported too many community activities to be a problem.

Open-End Responses

When asked to indicate their most critical current problem, responses from zero to eighteen items were checked by each respondent. The most frequently indicated items in descending order were: finding time to plan adequately, securing needed school materials and/or equipment, lack of opportunity for field trips, securing equipment and textbooks, teaching space and facilities interfere with learning, and adapting materials for slow learners.

The respondents were given the opportunity to write in any problems which they had that were not covered in the questionnaire. Sixteen of the eighty-one teachers wrote in responses, twelve of which emphasized or expanded problems already stated on the questionnaire. Time management was mentioned by four teachers and class interruptions by two teachers. Three problems not on the questionnaire were stated: need for funds for adult classes offered to low income groups, school guidance steering students away from home economics, and responsibilities associated with school accreditation study.

Major Findings

Some major findings of this study of problems recognized by vocational home economics teachers in North Carolina are:

1. The summary of personal data indicated that the average teacher had 8.76 years of teaching experience in vocational home economics and taught 4.75 classes per day with 18.50 students per class.

Of those teachers participating, 82.7 percent were both homemaker and teacher, and 82.7 percent taught the first year they were out of college. The data indicated that 17.3 percent of the teachers had a master's degree.

2. There was evidence that many problems persist at all levels of experience.

Thirty-three of the sixty-seven items were recognized as problems by more than half of the teachers responding. More than three-fourths of the respondents considered seven of the sixty-seven items to be a problem: budgeting time to provide for satisfying personal life, adjusting to demand for teacher's time and energy after school hours, finding time to plan adequately, adapting materials for slow learners, concept formation and development of generalizations.

3. There was evidence that none of the problems were unique to beginning teachers.

None of the problems on the questionnaire were recognized by beginning teachers only.

4. Evidence indicated significant relationships between problems reported by teachers and amount of teaching experience.

Analysis of problems reported indicated six items in which there were significant relationships between problems recognized and amount of teaching experience. Four of these six items were reported most frequently by teachers having eleven years and over of teaching experience: helping students plan supervised home experiences, helping students evaluate supervised home experiences, scheduling conferences with students, and allowing students freedom to express ideas. The two remaining problems were reported most frequently by teachers having seven to ten years of experience: overcoming community reluctance to accept new ideas in teaching and responsibility in too many community activities. None of the six items were reported most frequently by beginning teachers. In four of these six items, beginning teachers having less than two years of experience reported the fewest problems.

5. There was evidence that time management was a concern of the majority of North Carolina secondary home economics teachers.

Items directly related to time management were checked by 79 to 86 percent of the teachers.

6. The development of concepts and generalizations was a concern for over three-fourths of the teachers.

Concepts and generalizations were problems for 76.5 and 85.2 percent respectively.

7. Lack of opportunity for field trips was indicated to be a problem.

This difficulty was recognized by 81.5 percent of the teachers.

8. Analysis of data indicated an apparent need for effective techniques for adapting materials for slow learners.

Of those teachers responding, 76.5 percent reported this problem.

9. There was evidence that handling supervised home experiences, scheduling conferences, planning adult classes, handling extra-curricular activities, handling public relations, and keeping resource files organized and up-to-date were concerns of many teachers.

More than 65 percent of the teachers recognized these problems.

10. Discipline was a problem for only 14.8 percent of the teachers in this study.

In the literature reviewed discipline was consistently reported to be one of the major problems of teachers in general.

Since the respondents in this study were a random sample of vocational home economics teachers in North Carolina secondary schools, the findings can be applied to the larger population of teachers in this state.

Implications

Implications resulting from this study may provide a frame of reference for teacher education programs. Implications drawn from the findings of this study are grouped into three categories: (1) teacher education programs, (2) home economics supervisors, and (3) further research.

Teacher education programs

1. A knowledge of the problems recognized by vocational home economics teachers could be of value in planning curriculum and in providing beneficial learning experiences in the pre-service and in-service teacher education programs.

These problem areas were recognized by over three-fourths of the beginning teachers: slow learners, developing generalizations, adult needs, presenting subject matter, planning adult classes and time management. The problem areas recognized by over three-fourths of the experienced teachers were: slow learners, developing generalizations, concept formation, field trips and time management.

If teacher educators are aware of the problems recognized by vocational home economics teachers, emphasis could be given when teaching and planning the courses in the pre-service and in-service teacher education programs.

2. In order to encourage prospective and in-service teachers, it may be necessary for the pre-service and in-service education programs to provide information and instruction relative to problems recognized by teachers.

Once problems have been identified, changes may be indicated if home economics is to meet the needs of a modern society. Societal and technological changes present the home economics teacher with new challenges for which she may need pre-service and/or in-service education. Training and re-training of teachers are essential parts of the teacher education program. An awareness of the problems recognized by teachers allows for program planning in keeping with the trends of the times.

3. In-service education, county group meetings, summer school courses, workshops, conferences and other means of in-service education may be essential in preparing teachers to effectively and realistically cope with difficulties.

The home economics teacher's job is large and continually changing. In-service education programs could encourage professional and academic growth through program and teacher evaluation. Teacher growth could be facilitated by bringing teachers information of the most up-to-date methods, curriculum, and subject matter. Re-training of teachers can be accomplished through various types of programs. The type of program can be selected that will best fulfill the individual needs. Programs can be planned on the basis of the needs expressed by the teachers.

Home economics supervisors

1. Certain considerations may be appropriate as a supervisor evaluates the problems recognized by home economics teachers and makes recommendations in relation to the total home economics program.

   a. Feasibility of time management being emphasized in all phases of the home economics program.

   b. Emphasis on the development of concepts and generalizations appropriate for each level of instruction.

   c. Opportunity for field trips be explored and considered as a meaningful learning experience.

d. Planning in relation to home experiences and the adult program.

e. Scheduling conferences and achieving a balance in extra-curricular activities as they relate to time management.

f. Emphasizing the need for organized and up-to-date resource files.

g. Encouraging the implementation of effective public relations techniques.

Further study

1. Further research is needed to give information concerning the questions raised from this study.

Do beginning teachers recognize their problems?

Are experienced teachers more perceptive and willing to recognize problems?

Which problems are unique to home economics teachers?

Do teachers recognize the same problems as their supervisor and principal perceive them to have?

2. There is need for further study of time management techniques used by home economics teachers.

The following problems related to time management were reported by 79 to 86 percent of the respondents: finding time to plan adequately, adjusting to demand for teacher's time and energy after school hours, and budgeting time to provide for satisfying personal life.

Time management was a problem that existed for the majority of the teachers with varying amounts of experience in this study. Would this be a problem with other populations?

3. A study is apparently needed to determine effective teacher techniques for guiding students in forming concepts and generalizations and for adapting materials for slow learners.

Concepts, generalizations and slow learners were problems recognized by 76.5, 85.2 and 76.5 percent of the teachers respectively.

Problems in teaching are inevitable for vocational home economics teachers and for all other teachers. The key to this situation is the ability to recognize individual problems and to accept the challenge of finding a solution or an acceptable means of facing the problem. Changing times bring new hopes and new problems.

In relation to facing the future, Herbert Hoover is quoted as having said: "Wisdom consists not so much in knowing what to do in the ultimate as in knowing what to do next."[1]

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[1] Olive A. Hall and Beatrice Paolucci, Teaching Home Economics, (New York: John Wiley & Sons, Inc., 1961), p. 388.

BIBLIOGRAPHY

BIBLIOGRAPHY

Books

A Million Random Digits With 100,000 Normal Deviates. Rand Corporation. Glencoe, Illinois: The Free Press, 1955.

Conant, James Bryant. The Education of American Teachers. New York: McGraw-Hill Book Company, Inc., 1963.

Eye, Glen C. and Lane, Willard R. The New Teacher Comes To School. New York: Harper and Brothers, 1956.

Ferguson, George A. Statistical Analysis In Psychology and Education. New York: McGraw-Hill Book Company, Inc., 1959.

Franzblau, Abraham N. A Primer of Statistics for Non-Statisticians. New York: Harcourt, Brace & World, Inc., 1958.

Hall, Olive A. and Paolucci, Beatrice. Teaching Home Economics. New York: John Wiley & Sons, Inc., 1961.

Lee, Jeanette A. and Dressel, Paul L. Liberal Education and Home Economics. Columbia University: Bureau of Publications, Teachers College, 1963.

Yauch, Wilbur A., Bartels, Martin H. and Morris Emmet. The Beginning Teacher. New York: Henry Holt and Company, 1955.

Articles and Periodicals

Cable, Paul E. "Problems of New Teachers," Educational Administration and Supervision, 42 (March, 1956), 170-177.

Dropkin, Stanley and Taylor, Marvin. "Perceived Problems of Beginning Teachers and Related Factors," Journal of Teacher Education, XIV (December, 1963), 384-390.

Koontz, Elizabeth D. "Notes From The Field," North Carolina Education (February, 1966), p.26.

Lambert, Sam. "Beginning Teachers and Their Education," Journal of Teacher Education, XVII (December, 1956), 347-351.

____________ "The Teacher's First Year," National Education Association Journal, 45 (March, 1956), 152-153.

McIntyre, Virgie M. "Let The Teacher Teach," North Carolina Education, (February, 1966), p. 35.

Norton, Naomi. "Are You Both Homemaker and Teacher?" Practical Forecast, 2 (April, 1957), 19.

Rader, Bonnie, "Beginners Need In-Service Education," Journal of Home Economics, 53 (January, 1961), 26-28.

Roskie, Gertrude. "The Homemaking Program for Beginning Teachers," Journal of Home Economics, 46 (March, 1954), 199.

Smith, Henry P. "A Study of the Problems of Beginning Teachers," Educational Administration and Supervision, 36 (May, 1950), 257-264.

Stout, John B. "Deficiencies of Beginning Teachers," Journal of Teacher Education, 3 (March, 1952), 43-46.

Stovall, Ruth. "Education In A World Of Change," Journal of Home Economics, 64 (September, 1962), 537-540.

Tower, Melvin M. "A Study of Problems of Beginning Teachers in the Indianapolis Public Schools," Educational Administration and Supervision, 42 (May, 1956), 261-273.

Wey, Herbert W. "Difficulties of Beginning Teachers," School Review, 59 (January, 1951), 32-37.

Wilkinson, Rachael D. "Activities of Beginning Teachers," Education, 78 (April, 1958), 496-498.

Youmans, Rita Louise. "Home Economics Teachers' Distribution of Time," Journal of Home Economics, 50 (March, 1958), 226.

Unpublished Material

Anderson, Roger Wendell. "Relationships between the Problems of Student Teachers." Dissertation Abstracts, XXIV, 1962, p. 1067.

Elliot, Bessie Marie. "A Study Concerning the Orientation of New Teachers in the Metropolitan Area of St. Louis." Dissertation Abstracts, XIV, 1954, p. 1629.

Homeier, G. A. Custer. "An Analysis of Current Administration Procedures Used in the Orientation of New Teachers in Michigan Public Schools." Dissertation Abstracts, XIII, 1953, p. 1067.

Jaituni, Anupama A. "A Study to Discover How Selected Northern Illinois Home Economics Students and Beginning Teachers Feel About the Adequacy of Their Preparation to Teach Home Economics at the Secondary Level." Unpublished Master's thesis, Northern Illinois University, Dekalb, Illinois, 1963.

Jones, Agnes Marie Anderson. "A Follow-Up Study of Beginning Home Economics Teachers Graduated from the University of Wisconsin to Ascertain Education Needs." Unpublished Ph.D. Dissertation, University of Wisconsin, 1954.

Koontz, James Eugene. "A Study of the Relationship Between the Problems of Arkansas Secondary School Teachers in Certain Selected Schools and the Factors of Professional Preparation, Teaching Experience, the Sex of the Teacher, and the Size of the School System." Dissertation Abstracts, 1963, XXIV, pp. 1493-1494.

Spillers, Barbara Jeanne. "Problems Recognized by Beginning Vocational Home Economics Teachers in a Midwestern Area." Unpublished Master's thesis, Iowa State College, Ames, Iowa, 1958.

Stone, Edward H. "Personal and Professional Problems Recognized by Beginning Junior and Senior High School Teachers and the Relation of the Number of These Problems to Personal Characteristics, Professional Preparation, Teaching Assignment and Career Plans." Dissertation Abstracts, XXV, 1963, p. 1037.

Wallace, Morris S. "The Induction of New Teachers." Unpublished Doctoral dissertation, Teachers College, Columbia University, 1948.

White, Alice Post. "A Survey of Certain Factors in the School Environment Experienced by University of Wisconsin Home Economics Education Graduates, 1960-1964, During the First Year of Professional Employment." Unpublished report to staff, Department of Home Economics Education and Extension, University of Wisconsin, 1965.

APPENDICES

APPENDIX A

QUESTIONNAIRE

NO NAME PLEASE!

? ? Are These Your Problems ? ?

Please indicate your situation by answering each of the following items. Place a check in the appropriate column to the right of each statement.

I. Working with learners

	does not concern me	problem already solved	somewhat a problem	a difficult problem
Arousing and holding student interest; motivation				
Adapting to the needs, interests, and abilities of the students				
Adapting materials for slow learners				
Providing challenge for students with superior ability				
Helping students to develop generalizations				
Guiding problem-solving				
Guiding concept formation				
Leading a class to self-evaluate				
Allowing students freedom to express ideas				
Helping students plan supervised home experiences				
Helping students conduct (carry through plans) experiences				
Helping students evaluate supervised home experiences				
Keeping class routines running smoothly				
Handling problems of discipline and control				
Holding respect of students				
Scheduling conferences with students				
Conducting conferences with students				
Encouraging participation in FHA				
Advising FHA chapter				
Identifying adult needs related to home economics education				

II. Development of curriculum

	does not concern me	problem already solved	somewhat a problem	a difficult problem
Organizing curriculum content and sequence				
Planning subject matter presentation				
Presenting subject matter effectively				
Using current information in home economics				
Providing variety in learning experiences				
Making home visits				
Working cooperatively with parents in homes; parental contacts				
Becoming acquainted with the community; understanding social and economic problems in the community				
Gearing home economics program to community customs and practices				
Developing a systematic public relations program; interpreting home economics to the community				
Securing group and individual parental cooperation with the school home economics program				
Overcoming community reluctance to accept new ideas in teaching				
Teaching classes for boys and girls				
Hampering program effectiveness by curricular and extra-curricular activities				
Teacher-pupil planning				
Use of school services and personnel				
Securing needed school materials and/or equipment				
Understanding and using courses of study and curriculum guides				
Lack of opportunity for field trips				
Planning adult classes				

III. Management of time and other resources

	does not concern me	problem already solved	somewhat a problem	a difficult problem
Responsibility in too many community activities				
Department management techniques including planning the year's budget, keeping accounts and department records				
Keeping resource files organized				
Keeping resource files up-to-date				
Keeping records required by school and state department				
Preparation and student activities unrelated to teaching home economics				
Classes too large for effective learning				
Overload in number of classes so that teaching is impaired				
Managing home room periods				
Understanding and using the marking (grading) system				
Including students in department care duties				
Including students in planning for department care				
Teaching space and facilities interfere with learning				
Determining annual and long-term needs for facilities and equipment				
Planning for selection of equipment and facilities				
Securing equipment and textbooks				
Planning educational activities for summer employment				

IV. Personal Adjustment

	does not concern me	problem already solved	somewhat a problem	a difficult problem
Finding time to plan adequately				
Adjusting to demand for teacher's time and energy after school hours				
Budgeting time to provide for satisfying personal life				

	does not concern me	problem already solved	somewhat a problem	a difficult problem
Relationships with supervisors				
Communications with administrators				

V. Professional orientation

Establishing and maintaining good relationships with school personnel				
Determining the teacher's responsibility to the community				
Comprehension of administrative policies				
Active participation in professional organizations . . .				
Developing desirable personal and professional qualities				

VI. About you and your school - please write in your answers

Your total years of teaching experience . . . . ________

Years of teaching experience in vocational home economics . . . . ________

Number of classes taught per day . . . . ________

Average number of students per class . . . . ________

Are you both homemaker and teacher . . . . ________

Were you married before you began teaching . . . . ________

Did you teach the first year you were out of college . . ________

Do you teach any occupational training courses . . . . . ________

Do you teach any Introduction to Vocations courses . . . ________

How many home economics teachers are there in your department . . . . ________

Do you have a master's degree . . . . ________

VII. In considering all the items you have answered, please place an "X" to the left of the item which you feel is currently your most critical problem

If you have had or are having a particular problem that has not been mentioned in this questionnaire, won't you please tell me about it below!

APPENDIX B

Letter of Transmittal

First Follow-Up: Letter

Second Follow-Up: Postcard Device

1207 West Market Street
Greensboro, North Carolina
February 14, 1966

Dear Home Economics Teacher,

May I have a few minutes from your busy schedule to find out what teaching problems you're currently facing? As a graduate student in Home Economics Education at the University of North Carolina at Greensboro, I am conducting a thesis study of problems recognized by North Carolina vocational home economics teachers, and of how these problems may change with experience. The best place to get this information is directly from you.

I have enclosed a questionnaire which is being sent to a random sample of 100 vocational home economics teachers in North Carolina secondary schools. Will you please fill out this questionnaire and return it in the enclosed envelope by Friday, March 4? Your cooperation is greatly needed so that your problems and those of other home economics teachers can be identified. I shall be happy to provide you a summary of the findings of this study upon your request.

Your promptness will be deeply appreciated.

Very truly yours,

Sammie C. Gatlin

scg

Enclosures: questionnaire, envelope

1207 West Market Street
Greensboro, North Carolina
March 5, 1966

Dear Home Economics Teacher,

About three weeks ago you received a questionnaire concerning your problems as a vocational home economics teacher. From those questionnaires already received, it is apparent that teachers much like you are exceedingly pressed for time. Perhaps this is the reason your questionnaire hasn't been returned yet.

Your response is greatly needed to carry out this study. since the more complete the returns, the more certain the findings. Won't you please take a few minutes from your busy schedule to fill out your questionnaire and return it as soon as possible?

If you have misplaced your copy of the questionnaire, please drop me a card, and I will be happy to send you another.

Thank you for your cooperation. Your promptness in this matter will be deeply appreciated.

Very truly yours,

Sammie C. Gatlin

scg

Note: If you have already returned your questionnaire, please disregard this letter.

DOUBLE POSTCARD DEVICE

(Side 1)

March 14, 1966

Dear Home Economics Teacher,

Several weeks ago you received a questionnaire concerning problems of vocational home economics teachers. Would you please take a minute to respond to the attached postcard?

Thank you very much for your cooperation.

Very truly yours,

Sammie C. Gatlin

(Side 2)

PLEASE CHECK YOUR RESPONSE:

____ I plan to complete the questionnaire within 3 days and return it.

____ I have already returned the questionnaire.

____ My copy was misplaced. Please send another. (Please give name of school.)

____ I do not wish to participate in this study.

VT 006 725
Richardson, Burl B.; Edington, Everett D.
The Training Needed for Selected Farm Related Occupations in Four Counties in Oklahoma. Bulletin Number 2, Research Series Number 2.

Oklahoma State Univ., Stillwater. Dept. of Agricultural Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 68 36p.

*AGRICULTURAL EDUCATION; *OFF FARM AGRICULTURAL OCCUPATIONS; EDUCATIONAL NEEDS; *EMPLOYMENT OPPORTUNITIES; EMPLOYMENT QUALIFICATIONS; *CURRICULUM; AGRICULTURAL SUPPLIES; AGRICULTURAL MACHINERY; HORTICULTURE; FOOD PROCESSING OCCUPATIONS; FARM STRUCTURES
OKLAHOMA

To determine what preemployment training is important in obtaining a job in farm-related occupations, 63 selected agricultural businesses in four purposively-determined counties in Oklahoma were included in the study. Vocational agriculture teachers in the four-county area identified farm machinery, dairy processing, buildings and structures, nursery production, and feed, seed, and fertilizer as the most important farm related occupations. All agricultural business areas reported an expected increase in employment in the next 5 to 10 years, with nursery production and farm machinery reporting the greatest anticipated increase. Farm background and vocational agriculture training was considered important in nursery production, farm machinery, and feed, seed and fertilizer. Major curriculum content needed in agronomy, farm mechanics, animal science, and management were identified. Training through Future Farmers of America activities was of some importance to all businesses. Some recommendations were that more horticulture be included in the vocational agriculture program, that formal business training and salesmanship be offered to high school students, and the development of joint programs of vocational education between distributive education and agricultural education. (DM)

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36

ED033 237

THE TRAINING NEEDED FOR SELECTED FARM RELATED OCCUPATIONS IN FOUR COUNTIES IN OKLAHOMA

BY

BURL B. RICHARDSON & EVERETT D. EDINGTON

BULLETIN NUMBER 2
RESEARCH SERIES NUMBER 2
AGRICULTURAL EDUCATION DEPARTMENT
OKLAHOMA STATE UNIVERSITY
STILLWATER, OKLAHOMA

VT006725

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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DETERMINING THE TRAINING NEEDED FOR SELECTED FARM RELATED OCCUPATIONS IN FOUR COUNTIES IN OKLAHOMA

INTRODUCTION

BY

Burl B. Richardson & Everett D. Edington

The United States is one of the leading countries in agriculture. It produces with such abundance that it has a large surplus of agriculture products now in storage.

Rapid technological advances in agricultural production have caused many changes in the field of agriculture over the last few decades. One of these changes is the decrease in the percent of the population doing farm work. This change has brought about the problem of where these people will go and most important what they will do to earn a living. Because of this decrease, there will be fewer chances for high school graduates of vocational agriculture to enter farming in the future.

Another important change has been the increase in the number of people needed to supply the farmer with needed services and goods and to market his product. This change has brought about new job opportunities in farm related occupations for those who could not enter into farming.

VT 006 725
VT006725

Today there are fewer farmers needed to produce the nation's food supply, but due to the mechanization of farming more people are needed to help supply the farmer with goods and services.

Statement of the Problem

As the number of farmers continues to decrease, many high school graduates of vocational agriculture who could not enter into farming obtain jobs in farm related occupations. The questions important to this study are as follows:

(1) What training is needed for high school graduates of vocational agriculture who plan to enter into farm related occupations?

Other questions of secondary importance to this study are:

(2) What farm related occupations are most important in the area to be studied?

(3) What will be the trend in the next five to ten years concerning opportunities for employment in occupations related to agriculture?

Purpose of the Study

It is the purpose of this study to determine from selected farm related businesses what pre-employment is training is important in obtain- a job in these farm related occupation. The information obtained through this study may also contribute to the revision of teaching material for vocational agriculture in high school in order to more adequately meet the present needs of our farm youth.

Scope of the Study

This study included four counties in Oklahoma with the intention that the information obtained here may be applicable to a large portion of the state. The counties were selected due to their convenience in location and as representative of different areas of the state. The information was obtained from those selected farm related businesses located in these four counties. The study consists of the most important farm related businesses in these counties as determined by teachers of vocational agriculture.

Limitations of the Study

The study was limited to Stephens and Comanche counties from the southern portion of the state and Payne and Noble counties from the north. Only selected farm related businesses of highest importance located in these counties were used.

Procedure Used in the Study

In order to obtain the information needed to complete the study, the following procedure was carried out:

(1) A list of farm related occupations was obtained from various agricultural occupation booklets.

(2) This list was sent to vocational agriculture teachers located in the four counties. They rated them as to how important each was in their particular county. A definite attempt was made to exclude all occupations which would probably require more than a high school education.

(3) Of the occupations with the highest rating of importance, five were selected as the type of businesses to interview in order to get the information needed.

(4) These five types of businesses were selected primarily on the basis of their rating, but some consideration was given as to their growing importance in these counties. The five selected were as follows: Farm Machinery; Dairy Processing; Buildings and Structures; Nursery Production; and Feed, Seed, and Fertilizer.

(5) An interview form containing all different areas of training usually taught in high schools was the instrument used in rating how important certain areas of training were for a particular type of business. The tentative interview form was then revised by going to one of each of the five related occupations selected and asking them what they felt needed to be added and what should be left out.

(6) The phone book was used to obtain the address of each farm related business to be visited.

(7) The manager of each business was asked to rate each item of training according to their importance in aiding a high school graduate to obtain a job in their business. Each item of training was to be rated either essential, important, of some importance, or of no importance. Additional comments and suggestions were encouraged.

(8) Sixty-three farm related businesses from the four counties were interviewed. The total number of each type of business visited was as follows: Farm Machinery 13; Dairy Processing 3; Buildings and Structures 21; Nursery Production 7; and

Feed, Seed, and Fertilizer 19.

(9) In presenting the data a score or value was given to each rating. The values of each were as follows: essential 100 points, important 66 points, of some importance 33, and those of no importance were worth 0 points. The mean rating was taken on each item of training. Each of the five related occupations ratings were kept separate in order that they could be compared with one another. The "average total rating" was obtained by multiplying the number of businesses in each category by its average and then dividing by the total of all in the study.

TRENDS IN EMPLOYMENT IN FARM RELATED BUSINESSES

The data in Table I reveals that all five farm related businesses expect an increase in employment in the next five years.

Nursery Production, with an expected 60 percent increase in employment, is by far the fastest growing farm related occupation of the five.

Farm Machinery expects to increase its employment from a present 49 to 70 employees, which is a 24.8 percent increase.

A gain from 175 to 220 employees or 25.6 percent increase is expected by Buildings and Structures.

An increase of 3.7 percent in employment is anticipated by the Feed, Seed, and Fertilizer businesses.

Dairy processing shows the smallest increase of 3.3 percent, but they have the largest average number of employees per business.

IMPORTANCE OF TRAINING IN VOCATIONAL AGRICULTURE

Table II shows 69.2 percent of the Farm Machinery businesses indicating four years of vocational agriculture training in high school as important for their employees, while 30.6 percent indicated two to three years as being important.

Thirty three percent of the Dairy Processing businesses chose three years of vocational agriculture training as important. Thirty-three percent believed two years was important. Thirty-three percent felt that no vocational agriculture training was necessary; this may be because may of these employees have no direct contact with the farmer.

Thirty-three percent of the Buildings and Structures said two years of vocational agriculture training was important while 23.8 percent indicated no vocational agriculture training was needed. Ninteen percent

TABLE I

FUTURE TREND IN EMPLOYMENT IN THE NEXT FIVE TO TEN YEARS
FOR SELECTED FARM RELATED OCCUPATIONS

Business	Number of Business	Present		Future		Percent Increase
		Total	Average Per Business	Total	Average Per Business	
Farm Machinery	13	49	3.7	70	5.3	42.8
Dairy Processing	3	240	80.0	248	82.6	3.3
Buildings and Structures	21	175	8.3	220	10.4	25.6
Nursery Production	7	35	5.0	56	8.0	60.0
Feed, Seed, and Fertilizer	19	211	11.1	219	11.5	3.7

TABLE II

TRAINING IN VOCATIONAL AGRICULTURE CONSIDERED IMPORTANT FOR SELECTED FARM RELATED OCCUPATIONS

YEARS	Farm Machinery %	Dairy Processing %	Buildings and Structures %	Nursery Production %	Feed, Seed, and Fertilizer %
0	0	33.3	23.8	0	5.2
1	0	0	19.0	0	10.5
2	15.38	33.3	33.3	14.2	21.0
3	15.38	33.3	9.5	14.2	5.2
4	69.23	0	14.2	71.4	57.8

felt one year would be important and 14.2 percent thought four years to be beneficial. Three years was indicated as important by 9.5 percent of the Buildings and Structures.

Seventy-one percent of the Nurseries indicated that four years of vocational agriculture training was important training. Twenty-eight percent felt that two to three years was important.

Fifty-seven percent of the Feed, Seed, and Fertilizer businesses show four years of vocational agriculture as important. Twenty-one pe cent said two years was important; 10.5 percent indicated one year was important and 5.2 percent said no training in vocational agriculture wa necessary for the Feed, Seed, and Fertilizer business.

IMPORTANCE OF FARM BACKGROUND

Table III reveals that a farm background is almost important for Farm Machinery, Nursery Production, and the Feed, Seed, and Fertilizer businesses. Buildings and Structures rated a farm background almost of some importance while Dairy Processing found it to be of no importance.

The average total rating shows a farm background to be of some importance to most of the farm related occupations.

TRAINING IN AGRONOMY

An analysis of Table IV shows identification of crops and insect control as being important training for Farm Machinery and Nursery Production. Only with Buildings and Structures with Dairy Processing was identification of crops and insect control of no importance.

The kinds of uses of fertilizers were rated as important for Nursery Production and the Feed, Seed, and Fertilizer businesses and only of some importancy by farm Machinery. The kinds and uses of fertilizer was of no

TABLE III

AVERAGE RATING OF IMPORTANCE OF A FARM BACKGROUND FOR SELECTED FARM RELATED OCCUPATIONS

ITEM OF TRAINING	Farm Machinery	Dairy Processing	Buildings and Structures	Nursery Production	Feed, Seed, and Fertilizer	Average Total
A farm background	59	11	28	62	61	47

TABLE IV

AVERAGE RATING OF IMPORTANCE OF TRAINING IN AGRONOMY FOR SELECTED FARM RELATED OCCUPATIONS

ITEM OF TRAINING	Farm Machinery	Dairy Processing	Buildings And Structures	Nursery Production	Feed, Seed, and Fertilizer	Average Total
Identification of crops	59	0	13	33	73	42
Disease of Crops	28	0	6	42	56	29
Insect Control	38	11	20	61	73	44
Planting of Crops	63	0	11	33	58	38
Pasture and Range Management	38	0	8	19	37	30
Soil Management and Conservation	54	0	13	52	52	37
Kinds and Uses of Fertilizers	58	0	11	85	79	49
Harvesting of Crops	74	0	19	33	54	42

importance to Dairy Processing and Buildings and Structures.

Planting of crops and soil management and conservation are of some importance for all farm related occupations except Dairy Processing and Buildings and Structures.

The data also shows that harvesting of crops is important training for the Farm Machinery business while only of some importance for Nursery Production and Feed, Seed, and Fertilizer. Harvesting of crops is of no importance for either Dairy Processing or Buildings and Structures.

Diseases of crops is of some importance to Nursery Production and the Feed, Seed, and Fertilizer business, but it is of no importance to Farm Machinery, Dairy Processing and Buildings and Structures.

Planting of crops and soil management and conservation are of some importance for all farm related occupations except Dairy Processing and Buildings and Structures.

The data also shows that harvesting of crops is important training for the Farm Machinery business while only of some importance for Nursery Production and Feed, Seed, and Fertilizer. Harvesting of crops is of no importance for either Dairy Processing or Buildings and Structures.

Diseases of crops is of some importance to Nursery Production and the Feed, Seed, and Fertilizer business, but it is of no importance to Farm Machinery, Dairy Processing and Buildings and Structures.

Pasture and range management was only of some importance to Farm Machinery and the Feed, Seed, and Fertilizer business. Buildings and Structures, Dairy Processing, and Nursery Production rated pasture and range management of no importance.

It is worthy to note that with the exception of diseases of crops and pasture and range management, the average total rating of all other items of training in Agronomy was of some importance to most of the farm related occupations.

TRAINING IN LIVESTOCK AND POULTRY

The data presented in Table V reveals that the feeding of poultry and livestock is important for the Feed, Seed, and Fertilizer business. Farm Machinery rated the feeding of livestock and poultry of some importance while it was of no importance to Dairy Processing, Buildings and Structures, and Nursery Production.

Controlling diseases and parasites was rated important by the Feed, Seed, and Fertilizer businesses with Dairy Processing and Nursery Production considering controlling diseases and parasites of no importance.

Management and marketing of poultry and livestock was rated of some importance and almost important by the Feed, Seed, and Fertilizer business, but it was of no importance to Buildings and Structures, Dairy Processing, and Farm Machinery.

The data also shows that identification and selection of breeds was of some importance to Feed, Seed, and Fertilizer, Farm Machinery, and Dairy Processing. Buildings and Structures and Nursery Production rated identification and selection of breeds of no importance.

The average total rating of training in the area of livestock and poultry revealed feeding and controlling diseases and parasites as the only two of some importance to most of the farm related businesses.

TRAINING IN FARM MECHANICS

Table VI shows that figuring bills of material is important and almost important by Farm Machinery and of some importance of Dairy Processing. They were of no importance to Buildings and Structures, Nursery Production and Feed, Seed, and Fertilizer.

Farm Machinery rated arc welding almost important while it was of no importance ot Dairy Processing, Buildings and Structures, Nursery Production

TABLE V

AVERAGE RATING OF IMPORTANCE OF TRAINING IN LIVESTOCK AND POULTRY FOR SELECTED FARM RELATED OCCUPATIONS

ITEM OF TRAINING	Farm Machinery	Dairy Processing	Buildings and Structures	Nursery Production	Feed, Seed, and Fertilizer	Average Total
Identification and Selection of Breeds	35	44	11	9	45	28
Management of Poultry and Livestock	30	11	14	9	63	31
Marketing of Poultry and Livestock	22	11	11	9	40	22
Feeding of Poultry and Livestock	40	11	13	14	82	39
Controlling Diseases and Parasites	27	33	15	9	69	34

TABLE VI

AVERAGE RATING OF IMPORTANCE OF TRAINING IN FARM MECHANICS FOR SELECTED FARM RELATED OCCUPATIONS

ITEM OF TRAINING	Farm Machinery	Dairy Processing	Buildings and Structures	Nursery Production	Feed, Seed, and Fertilizer	Average Total
Planning the home Farm Shop	53	0	45	47	18	36
Farm electrification	30	0	31	28	13	23
Project Work	47	22	42	23	18	32
Farm Carpentry	43	11	69	47	20	44
Buildings and Structures	30	11	77	42	27	45
Arc Welding	61	11	18	14	10	24
Farm Power and Machinery	84	44	23	33	26	38
Figuring Bills of Material	63	33	95	47	61	70
Plumbing and Pipe Work	30	33	47	52	17	34
Bolt Cutting and Threading	50	33	25	28	6	28
Oxyacetylene Welding	58	33	12	28	8	23
Farm Water Supply	30	0	31	28	22	24

and Feed, Seed, and Fertilizer.

Farm carpentry was important for Buildings and Structures and of some importance for Farm Machinery and Nursery Production. Feed, Seed, and Fertilizer and Dairy Processing rated Farm Carpentry of no importance.

As evidenced by the findings, training in buildings and structures was rated important for the Buildings and Structures business and of some importance by Nursery Production. Dairy Processing, Farm Machinery and Feed, Seed, and Fertilizer businesses considered training in buildings and structures of no importance.

Planning the home farm shop was of some importance for Farm Machinery, Buildings and Structures and Nursery Production, Feed, Seed, and Fertilizer, and Dairy Processing found planning the home shop of no importance.

Project work was of some importance to Farm Machinery and Buildings and Structures while Dairy Processing, Nursery Prodction, Fed, Seed, and Fertilizer business found project work of no importance.

Farm electrification and farm water supply were found to be of no importance for all five farm related occupations.

The average total rating shows all items except farm electrification, arc welding, bolt cutting and threading, oxyacetylene welding, and farm water supply as being of some importance to most of the farm related occupations.

TRAINING IN FARM BUSINESS

An analysis of Table VII reveals that keeping farm records, figuring taxes and securing capital were rated of some importance and almost important by all businesses except Dairy Processing.

Selecting and buying insurance was of some importance to Nursery Production and Farm Machinery, but was of no importance to Feed, Seed, and

TABLE VII

AVERAGE RATING OF IMPORTANCE OF TRAINING IN FARM BUSINESS FOR SELECTED FARM RELATED OCCUPATIONS

ITEM OF TRAINING	Farm Machinery	Dairy Processing	Buildings And Structures	Nursery Production	Feed, Seed, and Fertilizer	Average Total
Keeping farm records	53	0	36	52	50	44
Figuring taxes	51	11	44	61	48	47
Securing capital	58	0	40	60	34	43
Selecting and Buying Insurance	45	0	31	47	19	30

Fertilizer, Dairy Processing, and Buildings and Structures.

The average total rating showed that with the exception of selecting and buying insturace, all other items of training in farm business were of some importance to most of the farm related occupations.

LEADERSHIP TRAINING

In analyzing the data in Table VIII, being officer of a chapter or chairman of a committee and competing in speech contests were rated of some importance by all selected farm related occuations. Several of the businesses rated them alomst important.

Competing in shows and fairs was rated of some importance by all except Buildings and Structures.

The average total rating shows all training in FFA activities was of some importance to all selected farm related occupations, with speech training given the highest ratings and competing in shows and contests the lowest.

TRAINING IN ENGLISH

An analysis of Table IX shows that the ability to speak and write clearly was essential for Dairy Processing and highly important for Farm Machinery, Buildings and Structures, Nursery Production and Feed, Seed, and Fertilizer.

Farm Machinery, Dairy Processing, Buildings and Structures, and Feed, Seed, and Fertilizer rated how to spell correctly and use correct English highly important while Nursery Production found it almost important.

Writing a good letter was rated important by Farm Machinery and Buildings and Structures and almost important by Dairy Processing, Nursery Production, and Feed, Seed, and Fertilizer.

TABLE VIII

AVERAGE RATING OF IMPORTANCE OF TRAINING IN F.F.A. ACTIVITIES FOR SELECTED FARM RELATED OCCUPATIONS

ITEM OF TRAINING	Farm Machinery	Dairy Processing	Buildings And Structures	Nursery Production	Feed, Seed, and Fertilizer	Average Total
Officer of chapter or chairman of a committee	53	55	42	56	48	41
Competing in shows and Fairs	45	33	28	42	45	38
Competing in Speech Contests	45	44	42	61	48	47

TABLE IX

AVERAGE RATING OF IMPORTANCE OF TRAINING IN ENGLISH FOR SELECTED FARM RELATED OCCUPATIONS

ITEM OF TRAINING	Farm Machinery	Dairy Processing	Buildings and Structures	Nursery Production	Feed, Seed, And Fertilizer	Average Total
Ability to speak and write clearly	86	100	91	71	83	86
How to spell correctly	84	77	80	61	76	78
Use correct English	76	77	80	61	67	73
Writing a good letter	66	55	69	61	62	65

The average total rating reveals that all items of training except writing a good letter were rated important by farm related occupations. Writing a good letter was rated almost important. This indicates the importance of English in the curriculum which will enable the graduate to communicate effectively and clearly with others.

BUSINESS TRAINING

In analyzing Table X a very interesting fact was revealed. All five selected farm related businesses rated salesmanship as important and almost essential by the majority of businesses.

Bookkeeping was important to Feed, Seed, and Fertilizer, and Nursery Production and almost important to Farm Machinery, Dairy Processing and Buildings and Structures.

Farm Machinery, Buildings and Structures, and Feed, Seed, and Fertilizer rated typing almost important while it was just of some importance to Dairy Processing and Nursery Production.

The average total rating showed salesmanship as highly important to all businesses while typing and bookkeeping were almost important to all. This indicated that it is quite important that young people planning to enter these occupations have some formal business training while in high school.

SCIENCE BACKGROUND

Table XI shows general science of some importance to Farm Machinery, Dairy Processing, and Nursery Production while it was almost of some importance to Buildings and Structures and Feed, Seed, and Fertilizer business.

TABLE X

AVERAGE RATING OF IMPORTANCE OF TRAINING IN BUSINESS FOR SELECTED FARM RELATED OCCUPATIONS

ITEM OF TRAINING	Farm Machinery	Dairy Processing	Buildings And Structures	Nursery Production	Feed, Seed, and Fertilizer	Average Total
Typing	48	33	51	47	59	51
Bookkeeping	63	55	63	66	65	64
Salesmanship	92	74	91	85	83	87

TABLE XI

AVERAGE RATING OF IMPORTANCE OF TRAINING IN SCIENCE
FOR SELECTED FARM RELATED OCCUPATIONS

ITEM OF TRAINING	Farm Machinery	Dairy Processing	Buildings and Structures	Nursery Production	Feed, Seed, and Fertilizer	Average Total
General Science	40	44	32	57	31	37
General Chemistry	33	44	16	61	24	28
Physics	20	33	14	28	12	17
Biology	20	33	14	57	21	23

Nursery Production rated general chemistry almost important and Farm Machinery, and Dairy Processing rated it of some importance. It was of no importance to Buildings and Structures and to Feed, Seed, and Fertilizer.

Physics was of some importance to Dairy Processing and of no importance to all others.

Biology was found almost important to Nursery Production, of some importance to Dairy Processing, and of no importance to Farm Machinery, Buildings and Structures, and Feed, Seed, and Fertilizer.

The average total rating shows general science as the only item of training in the area of science as being of some importance.

BACKGROUND IN MATHEMATICS

Table XII reveals basic arithmetic as essential to Dairy Processing and almost essential to all other businesses involved.

Algebra was of some importance and almost important to Farm Machinery and Buildings and Structures. Algebra was important to Dairy Processing. It was of no importance to Nursery Production and Feed, Seed, and Fertilizer business.

Geometry was rated of some importance to Buildings and Structures, Dairy Processing and Farm Machinery, but it was of no importance to Nursery Production or to Feed, Seed, and Fertilizer.

Trigonometry was of no importance to all businesses except Dairy Processing which felt it was of some importance.

The average total rating shows basic arithmetic as being almost essential with algebra and geometry of some importance and trigonometry of no importance.

TABLE XII

AVERAGE RATING OF IMPORTANCE OF TRAINING IN MATHEMATICS

FOR SELECTED FARM RELATED OCCUPATIONS

ITEM OF TRAINING	Farm Machinery	Dairy Processing	Buildings and Structures	Nursery Production	Feed, Seed, and Fertilizer	Average Total
Basic Arithmetic	70	100	95	95	95	92
Algebra	51	66	54	28	31	44
Geometry	38	33	48	28	26	36
Trigonometry	20	33	27	14	14	20

INDUSTRIAL ARTS AND DRIVER EDUCATION TRAINING

Data from Table XIII shows cabinet making, recognizing different wood and wood finishing as being important to Buildings and Structures, but they were of no importance to Farm Machinery, Dairy Processing, Nursery Production and Feed, Seed, and Fertilizer.

Operating power equipment in the shop was rated important by Farm Machinery and Buildings and Structures. It was of some importance to Dairy Processing, Nursery Production, and Feed, Seed, and Fertilizer.

Operating power equipment in the shop had the only average total rating of some importance while cabinet making, recognizing different wood, and wood finishing were rated close to being of some importance. In schools with adequate vocational agriculture shops, the students obtain this background in operating power equipment without taking an industrial arts course.

An analysis of Table XIV shows knowledge of drivers' training important and almost essential for all five farm related occupations.

The average total rating shows knowledge of driver's training highly important to all businesses.

ADDITIONAL TRAINING NEEDED IN NURSERY PRODUCTION EMPLOYMENT

The information presented in Table XV came from the additional comments and suggestions made by the Nursery Production businesses. They felt that this additional training in horticulture was needed in order to work in their type of business.

TABLE XIII

AVERAGE RATING OF IMPORTANCE OF TRAINING IN INDUSTRIAL ARTS FOR SELECTED FARM RELATED OCCUPATIONS

ITEM OF TRAINING	Farm Machinery	Dairy Processing	Buildings And Structures	Nursery Production	Feed, Seed, and Fertilizer	Average Total
Cabinet making	13	0	66	9	10	29
Recognizing different Wood	8	0	68	14	9	29
Wood finishing	3	0	70	9	3	26
Operating power Equipment in the shop	69	55	66	38	37	54

TABLE XIV

AVERAGE RATING OF IMPORTANCE OF DRIVERS' TRAINING

FOR SELECTED FARM RELATED OCCUPATIONS

ITEM OF TRAINING	Farm Machinery	Dairy Processing	Buildings And Structures	Nursery Production	Feed, Seed, And Fertilizer	Average Total
Drivers' training	78	89	90	85	95	88

TABLE XV

ADDITIONAL TRAINING IMPORTANT FOR WORKING IN NURSERY PRODUCTION

Item of Training	Nursery Production	
	Number	Percent
Identification of Plants	5	71
Greenhouse production	5	71
Planting of trees and shrubs	5	71
Propagation of plants	5	71
Insect control	4	57
Pruning of trees and shrubs	2	28
Landscaping	2	28
Soil chemistry	1	14

It was intresting to note that five, or 71.4 percent, of the Nurseries indicated that the following were important: identification of horticulture plants, greenhouse production, planting of trees and shrubs, and propagation of plants.

Four, or 57.1 percent, felt that insect control in horticulture is important training to work in that business.

Pruning of trees and shrubs and landscaping was considered important training by two, or 28.5 percent, of the Nurseries.

One, or 14.2 percent, said soil chemistry was needed in order to work in Nursery Production.

This is an area which is neglected by our teachers of vocational agriculture. Those departments near large population centers would be at an advantage to include horticulture training in their curriculum.

SUMMARY AND CONCLUSIONS

The purpose of this study was to attempt to determine the most important farm related occupations; what pre-employment training is needed to order to work in selected farm related occupations; and the trend in the next five to ten years concerning opportunites for employment in occupations related to agriculture.

The most important selected farm related occupations as determined primarily by vocational agriculture teachers working in the four county area were: Farm Machinery; Dairy Processing; Buildings and Structures; Nursery Production; and Feed, Seed, and Fertilizer.

The total of 63 businesses were visited using the personal interview method in obtaining the information needed. Selected areas of training were used to determine the training that was important for a particular farm related business. Additional comments and suggested areas of training were obtained from each of the five types of farm related occupations before the initial interviewing of all businesses began.

It was found that there is an expected increase in employment in the next five to ten years in all five related occupations. Nursery Production had the largest expected increase of 60 percent while Farm Machinery anticipates a 42.8 percent increase. A 25.6 percent increase is expected by Buildings and Structures with Dairy Processing and Feed, Seed, and Fertilizer anticipating only a slight increase of 3.3 and 317 percent. Automation and mechanization were the reasons given for the low increase in employment.

Four years of vocational agriculture training was considered important by 71.4 percent of the Nursery Production; 69.2 percent of the Farm Machinery; 57.8 percent of the Feed, Seed, and Fertilizer; and 14.2 percent of the Buildings and Structures. Sixty-six percent of the Dairy Processing felt two to three years was sufficient training.

A farm background was rated almost important for Farm Machinery, Nursery Production, and Feed, Seed, and Fertilizer. It was of no importance to Dairy Processing or to Buildings and Structures.

In Agronomy, Farm Machinery considered harvesting of crops important and all other items of some importance with the exception of diseases of crops which was of no importance. All items of training in Agronomy were of no importance to Dairy Processing and Buildings and Structures. The identification of crops, insect control, and the kinds and uses of fertilizer were important for the Feed, Seed, and Fertilizer business with the remaining items of training in Agronomy of lesser importance. Nursery Production rated the kinds and uses of fertilizer highly important with all other items except pasture and range management of less importance.

The feeding of livestock and poultry and controlling diseases and parasites were important to Feed, Seed, and Fertilizer. while all other items of training were of some importance. Farm Machinery found identification and selection of breeds and the feeding of poultry and livestock of some importance. Controlling diseases and parasites, and identification and selection of breeds were of some importance to Nursery Production and Buildings and Structures.

In the area of farm mechanics, training in farm power and machinery was highly important for Farm Machinery while all other items of training were rated almost important except farm electrification, buildings and structures, plumbing and pipe work, and farm water supply, which were of no importance.

Those items of training in farm mechanics that were of some importance to Dairy Processing were: farm power and machinery, figuring bills of material, plumbing and pipe work, bolt cutting and threading, and oxyacetylene welding.

Figuring bills of material in farm mechanics was almost essential to Buildings and Structures with farm carpentry and knowledge of buildings and structures being important.

Nursery Production four the following training in farm mechanics to be of some importance: planning the home farm shop, farm carpentry, buildings and structures, farm power and machinery, figuring bills of material, and plumbing and pipe work. The Feed, Seed, and Fertilizer business found that figuring bills of material was important training.

All items of training in farm business with the exception of selecting and buying insurance were of some importance to Farm Machinery, Buildings and Structures, Nursery Production, and Feed, Seed, and Fertilizer. Training in farm business was of no importance to Dairy Processing.

Training through FFA activities was of some importance to all five farm related occupations and close to important in some cases.

Also training in English was rated highly important by Farm Machinery and Buildings and Structures. Dairy Processing rated all training in English except writing a good letter as essential or important. Nursery Production and Feed, Seed, and Fertilizer rated all training in English as important or nearly important.

In the area of business, a very significant point was revealed. Salesmanship was rated highly important by all five farm related occupations and almost essential by some. Typing and bookkeeping were of some importance to important to all related occupations.

General science and chemistry were of some importance to Farm Machinery. All training in science was of some importance to Dairy Processing. Buildings and Structures and Feed, Seed, and Fertilizer believed general science to be almost of some importance. Nursery Production rated general science, general chenistry, and biology almost important.

Basic arithmetic was found to be almost essential by all related occupations. Algebra and geometry was of some importance to Farm Machinery and Buildings and Structures. Dairy Processing believed algebra to be important while geometry and trigonometry were of some importance.

In Industrial Arts, operating power equipment in the show was important to Buildings and Structures and Farm Machinery, and of some importance to the other related occupations. All training in industrial arts was important to Buildings and Structures.

Knowledge of drivers' training was highly important to all farm related occupations.

It was interesting to discover that Nursery Production felt additional training in horticulture was needed to work in this business. Seventy-one percent believed the following were important: identification of horticulture plants, green production, planting of trees and shrubs, and propagation of plants. Over half, or 57.1 percent, said insect control in horiculture was needed. The pruning of trees and shrubs, landscaping, and soil chenistry were indicated as being important by 28.5 percent or less.

Conclusions

It can be concluded from data presented in this study that the future trend in employment will be on the increase for the majority of the selected farm related occupations.

Results show that training in vocational agriculture is important for securing employment in these related occupations.

Due to the exceptionally high rating of salesmanship, there would be a sound basis for offering some type of curriculum which would cover this area.

It appears very eficent that additional training in the area of horticulture in needed in order to work in Nursery Production. The trend in employment clearly shows that Nursery Production will need many more qualified workers in the near future.

From the many comments made by businesses while this study was being conducted, it could be stated that the more a person can stand before people and learn how to express himself, the better the individual. The ability to recognize a customer's need is very essential to anyone attempting to work in any of these selected farm related occupations.

Recommendations

As a result of this study, it is recommended that more research be conducted concerning training needed for farm related occupations in still different parts of Oklahoma and include other important farm related occupations not used in this study. This will better enable us to see what the total picture is concerning training for related occupations.

It is recommended that teachers of vocational agriculture include more horiculture in their teaching in order to more adequately prepare those who might enter into Nursery Production as a field of work.

It should be recognized that three of the five related occupations expect to employ many more workers in the near future and that these same businesses feel that Vocational Agriculture is important training for employment in these occupations. Teacher of Vocational Agriculture are in a position to train their students in order to fill these positions.

Findings in this study serve as a sound basis for recommending that some formal business training, especially as it applies to salesmanship, be taken while in high school for those planning to enter into these occupations. Further investigation should be made into the possible need of joint programs of vocational education between Distributive Education and Agricultural Education which would better train youth to be qualified for related farm occupations in Agricultural Industry.

VT 007 240
Northrup, Herbert R., Ed.; Rowan, Richard L., Ed.
The Negro and Employment Opportunity. Problems and Practices.

Michigan Univ., Ann Arbor. Bureau of Industrial Relations
MF AVAILABLE IN VT-ERIC SET.
Bureau of Industrial Relations, Graduate School of Business Administration, University of Michigan, Ann Arbor, Michigan 48104 ($8.50).
Pub Date - 65 404p.

UNEMPLOYMENT; NEGROES; EQUAL OPPORTUNITIES (JOBS); UNIONS; MANAGEMENT; DROPOUTS; VOCATIONAL EDUCATION; *EMPLOYMENT OPPORTUNITIES; COMMUNITY PROGRAMS; *EMPLOYMENT PROGRAMS; *EMPLOYMENT PROBLEMS; NEGRO LEADERSHIP; EMPLOYMENT PATTERNS; *PERSONNEL INTEGRATION; LABOR LAWS; CIVIL RIGHTS LEGISLATION; *NEGRO EMPLOYMENT

This book developed from a conference held in November 1964 under the sponsorship of the Labor Relations Council of the Wharton School of Finance and Commerce of the University of Pennsylvania, in which leading scholars were brought together with representatives of companies that had worked toward integration over a long period. Twenty-eight papers include conference presentations and additional contributions which were secured for comprehensiveness. Sections of the book discuss: (1) general job problems of Negroes, (2) two views of equal rights and equal opportunity legislation, (3) approaches to equal opportunity at the company level with reports from six major companies, (4) union policies and programs in terms of opportunity for Negroes, (5) community approaches, including the reports of a survey of Chamber of Commerce associations in the East, South and Midwest, as well as reports of employment studies and programs in three states, (6) minority group employment problems in major cities, with reports of programs for dropouts, and (7) business and professional jobs and Negro leadership. (JK)

VT007240

THE NEGRO AND EMPLOYMENT OPPORTUNITY
Problems and Practices

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Library of Congress catalog card number 65-63900

Printed in the United States of America

FOREWORD

The Labor Relations Council of the Wharton School was established in 1946 and, except for a one-year interval, its programs have been an integral part of the school's program. Through the Council, a close cooperation has been maintained over the years between the Industry Department faculty and executives of the member companies. In the monthly seminars, attended by faculty and company members of the Council, many subjects of mutual interest have been discussed. The roster of guest speakers is an imposing one. The monthly seminars have been the heart of the Labor Relations Council, but we believe that other parts of the program have been very important.

Council funds have been used primarily to sponsor research in the field of labor-management relations by faculty members and graduate students. The results have been frequently made available in the form of articles published in numerous journals. The Council has also issued publications under its own auspices. They include the monograph series on Industry-Wide Collective Bargaining published in 1948, the Labor Arbitration Series published in 1952, and the book entitled *New Concepts in Wage Determination* published by McGraw-Hill Book Company, Inc., in 1957.

There is a third facet of Council activities. Whenever it has seemed that some particular problem of national importance might be clarified by public discussion, the Council has conducted public conferences. For example, in November, 1960, at the beginning of what seemed to be a period of economic growth and adjustment to technological change, a conference was held on "Industrial Relations in the 1960's — Problems and Prospects." The demand for the Conference Proceedings has been great. Serious consideration for holding another public conference was not given until early in 1964 when it became apparent that the most critical and the most perplexing issue of employer-employee relations had become the provision of equal job opportunities regardless of color. It seemed not only timely but urgently necessary to bring together a group of outstanding men whose experience made them eminently qualified to discuss not only the nature of the problem but the ways and means for resolving it. A public conference on "Equal Opportunity — The Job Aspect" was held on November 13, 1964. Dr. Herbert Northrup, Chairman of the Industry Department of the Wharton

School, had the primary responsibility for arranging the program.

We believe that the papers presented at the November 13, 1964 conference constitute a significant contribution to an understanding of the problem of providing equal job opportunity to which this nation is increasingly dedicating itself. Along with several other papers which the editors believed to be important additions, those manuscripts presented at the conference are now made available in this volume. It represents, we believe, a significant addition to the publications sponsored by the Labor Relations Council of the Wharton School.

GEORGE W. TAYLOR, Chairman,
Labor Relations Council and
Harnwell Professor of Industry

INTRODUCTION

As Dr. Taylor remarked in the foreword, this book developed from a conference sponsored by the Labor Relations Council of the Wharton School of Finance and Commerce, University of Pennsylvania, that was held in November, 1964. When the conference was being developed, it was determined to bring together the leading scholars in the field and representatives of those companies that had done the most effective job of integration over a long period of time. After the conference was completed, the material looked so promising that plans were made to publish it. Additional contributors were secured in order to make the book more comprehensive.

Part I of the book deals with general problems. In the introductory essay, Professor Ray Marshall of the University of Texas analyzes the job problems of Negroes from an overall point of view. He stresses the need for an increase in economic growth and an attack on the special structural problems of unemployment if progress is to be made toward equal opportunity. Dr. Marshall thus attempts to bridge the gap between the apostles of "growthmanship" and those of structural analysis as means of alleviating the overall situation.

Dr. Marshall's essay is followed by an unusual contribution by Professor Lowell Gallaway of the Wharton School. Dr. Gallaway uses hitherto unpublished data compiled by the Social Security Administration to analyze the differential between Negro and white income. His gloomy conclusion is that as the Negro grows older, he tends to go backward rather than forward in comparative earnings. Unfortunately, this is all too true. Scholars and practitioners alike will find in Dr. Gallaway's data additional proof of the difficult job ahead if equal opportunity is to be created.

In Part II, two views of equal rights and equal opportunity legislation are presented. Mr. George Schermer, a long-time practitioner in the field and now a consultant, discusses the effectiveness of equal opportunity legislation from the point of view of the administrator. He finds that the effectiveness is sometimes overplayed and that there is a limited effect of such legislation. Dr. Northrup covers much of the same ground, but more from the point of view of the impact on companies and unions. He emphasizes that neither this legislation nor equal pay laws have any extended opposition from management or labor, but that nevertheless their effectiveness is likely to be slight except for small companies because larger companies have already put their houses in order. The issue is training and competence, not equal employment. (Training is discussed in many of the papers in Parts IV, V, and VI.) In addition, Dr. Northrup calls attention to numerous potential conflicts between Title VII of the Civil Rights Act and already existing legislation.

In Part III, unusual analyses of individual company performance are presented by representatives of the companies. These are unusual because of their objectivity and also because they present experiences of some of the companies that have done the best job over the longest period of time. International Harvester, for example, has been practicing effective fair employment for more than twenty-five years. Lockheed-Georgia has done an exceptionally thorough job in a Southern atmosphere. Honeywell, General Motors, Western Electric, and General Electric all contribute to our knowledge by reciting their experience, the problems that they have had, and the problems that endure. Of particular note is the fact that each and every one of these companies stresses the need for a strong company policy effectively backed at the top. Moreover, they emphasize that, while they make unusual efforts to obtain minority group applicants, once the man is on the job, he receives no special treatment. The need to establish policies and adhere to them — not vary from them — would seem to be the most important lesson from these outstanding case experiences.

In Part IV, union policies are discussed. Professor Marshall provides insight into union racial practices using data collected over a long period of time and covering union activity in many parts of the country. Mr. James H. Jones, chairman of the Human Rights Committee of the Philadelphia AFL-CIO and International Representative of the United Steelworkers of America, tells of the very interesting work of the Human Rights Committee. Special problems in the printing and electrical trades and in the construction industry are analyzed by Messrs. Theodore W. Kheel and Joseph B. Meranze. These are industries, of course, in which union hiring policies are the dominant factor.

In Part V, community approaches to equal employment opportunity are highlighted. Professor Richard L. Rowan of the Wharton School presents an analysis of chamber of commerce and employer association activities. The tremendous range of these policies is shown by his survey, and a comparison is made between the activities of employer associations in the East, South, and Mid-West. Mr. Frank H. Cassell of Inland Steel Company summarizes the very fascinating Illinois study and its implications. Here was an unusual undertaking by a tri-partite committee appointed by the Governor of Illinois. Its results indicate the problems that big cities face in this regard. Such problems are discussed further in Part VI.

The remainder of Part V is composed of two articles dealing with a study made in Lancaster, Pennsylvania, by Dr. Walter Gershenfeld of Temple University and Dr. Rowan. The Lancaster study was sponsored by the Chamber of Commerce there. It has led to an action program designed to improve Negro employment opportunities, but it also raised some very interesting implications that Dr. Gershenfeld discusses. In particular, the Lancaster study demonstrates that high employment is not by itself the solution to Negro job opportunities, although certainly it is essential if such problems are to be mitigated. This case study confirms the general analysis of Professor Marshall that appears in Part I.

The vexing problems of our major cities insofar as race relations and Negro and minority group employment are concerned were touched upon in previous sections, particularly Part V. But so important is this problem to the future of equal opportunity in employment that a special section, Part VI, is devoted to it. The general problem of employing Negroes in a typical urban labor market — Philadelphia — is realistically analyzed by Mr. Walter H. Powell, Vice-President of International Resistance Company. Mr. Powell's company has been a leader in equal employment in practice, and yet the discouraging problems that the equal opportunity employer must overcome are revealed in his analysis. Dr. Arthur B. Shostak of the Wharton School further traces out some of the significant issues pertinent to the Negroes' advancement in the large urban areas.

On the bright side is the dropout program that has been developed by Carson, Pirie Scott and analyzed by its president, Mr. C. V. Martin. That dropouts with low I. Q.'s can be developed into useful citizens is proved by his experience and the additional work in Newark, New Jersey, that Bamberger's, a division of R. H. Macy, has pioneered so well. Mr. Charles W. Garrison, Vice-President of Bamberger's, discusses this experience.

It is natural, of course, that an urban-based university like the University of Pennsylvania would be keenly interested in the problems of its urban area. Philadelphia is the unique laboratory to analyze and learn about the problem of minority group employees. Approximately thirty per cent of the population is Negro, and it is growing very fast in relation to the white population. Professor Leonard Rico of the Wharton School gives a profile of the Negro worker in Philadelphia. Dr. Howard E. Mitchell, head of the University's Human Resources Project, explains what is being done by the university to rescue dropouts. It is a pleasure to add here that the Wharton School has established a center for the study of the economic problems of minorities and is continuing the type of work of which Dr. Rico's article is a product.

The final section of the book is devoted to business and professional jobs and Negro leadership. Professor William Gomberg of the Wharton School discusses the problems of Negro entrepreneurs and the need for a greater interest in the Negro community in establishing business. In this section, the speeches of Mr. M. J. Puryear, Associate Director of the National Urban League, and Mr. Roy Wilkins, Executive Secretary of the National Association for the Advancement of Colored People, are reproduced also. They discuss the problems of Negro job opportunities as seen by their organizations with particular reference on the part of Mr. Puryear to white collar professional workers.

The editors would like to thank all of those who contributed essays to this volume, and a special word of praise goes to Mrs. Margaret E. Doyle and Mrs. Helen White—excellent typists and faithful assistants.

HERBERT R. NORTHRUP
RICHARD L. ROWAN

Philadelphia
January 26, 1965

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PART I

An Overall Look at the Job Problems of Negroes

1

THE JOB PROBLEMS OF NEGROES

Ray Marshall *

Negro job problems have assumed added significance since World War II. The problems are not new, of course, but the migration of Negroes out of the rural South and the intensity of the civil rights crisis during the 1950's and 1960's caused more attention to be given the Negro's economic as well as his political and social conditions. What was formerly mainly a problem of the South has now become a national problem of major proportions. We have learned, moreover, that the economic impact of discrimination is not restricted to Negroes. For example, the Council of Economic Advisers estimated in September 1962 that the economic loss from racial discrimination in employment might well be as much as $13 billion a year,[1] which represented about 2.5 per cent of Gross National Product. And in 1963 the National Urban League estimated the direct national income loss from discrimination to be $14.3 billion. The League put the indirect loss at an additional $13.7 billion.[2]

Although there are important noneconomic causes of racial tension, there can be little doubt that job opportunities are central concerns of Negroes and whites. The white workers' hostility toward Negroes is caused in part by a fear of job competition. But the impact of inadequate jobs is much more serious for Negroes. And the problem is not only in terms of dollars, but also in terms of poor health, broken families, high rates of crime, squalid housing, personal degradation and misery. Indeed, Negroes apparently consider their most important problems to be economic. In a July, 1964 survey of Negro districts in New York City, for example, 54 per cent of those interviewed listed economic complaints (jobs, welfare, high cost of living, low pay, etc.) as being the "biggest problems that Negroes . . . have to worry about." Only 16 per cent listed civil rights (freedom, discrimination) as the Negroes' biggest worry.[3]

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*Professor of Economics, University of Texas.

This paper will discuss some of the causes of the increased militancy of Negroes, outline and discuss the reasons for Negro job patterns, and conclude with a discussion of some of the public policy measures designed to overcome the Negroes' job disadvantages.

Industrialization and Race Relations

Although we have no way of really knowing what was behind the increased militancy of the civil rights movement during the 1950's and early 1960's, technological and economic changes undoubtedly were fundamental. And although the Negroes' deteriorating economic position[4] was undoubtedly the immediate cause of some of this increased militancy, I would guess that the more fundamental factors relate to long-run changes in the economy, particularly industrialization and urbanization, which have *improved* rather than *worsened* the Negroes' economic and political welfare. There can be little question, for example, that the migration of Negroes out of the rural South has increased their political and economic power as well as their level of expectations. Nor is this surprising or unusual, because industrialization logically causes disadvantaged groups to demand full citizenship rights and equal educational and job opportunities as means of advancement in an industrial society.[5] Although most Negroes remain at the bottom of the economic ladder, the civil rights movement apparently is led by Negroes, particularly relatively well-educated young people, who have already advanced a little but who find further betterment blocked by racial discrimination. They realize, therefore, that there are problems that all Negroes must overcome if the favored few are to make additional progress. But in the United States the pattern of Negro protest also is conditioned by the constitutional guarantees of civil rights, which have been deferred in many areas since the Civil War.

Industrialization and urbanization have had other important influences on the civil rights movement. They have led to better communications, which focuses instant worldwide attention on the mistreatment of minorities, a significant factor in the cold war contest for the allegiance of the world's nonwhite majority. Since Negroes have more influence with the federal government than with many of the states, the growing power of the federal government, which is partly the product of the growing complexity of society, increases the Negroes' power to effect changes in states where they have little political power.

But industrialization also produces more direct changes in areas like the South. Economic development tends to dissolve regional differences and to make the South's political and economic leaders more vulnerable to pressures from civil rights groups. Particularly significant is the South's intense desire to industrialize as a means of overcoming the region's economic disadvantages. Negroes and whites learned from Little Rock, if they did not know it earlier, that racial unrest and violence will repel industry. Many Southerners also realize that the industrial society's emphasis on education is incompatible with an educational system weakened by the necessity of supporting a dual school system.

Moreover, the South's preoccupation with the preservation of racial segregation caused it to develop strained relations with the federal government which impeded economic development.[6] Industrialization not only has weakened this traditional position, but it also has led to growing political diversity which enhances Negroes' political power. Southern Democrats realize, for instance, that the emerging Republican Party will split the white vote and give Negroes more political power. Their dilemma is that industry tends to breed Republicans, and they cannot figure out how to get the former without the latter.

Labor Relations and Civil Rights

The Negroes' demands for equal employment opportunities and an end to discrimination by unions have important implications for labor relations. And, because of their training and experience, industrial relations specialists have a responsibility to interpret the civil rights movement to the business community. Many of the traditional tools of the behavioral sciences are applicable to racial employment problems, and there are many similarities between the civil rights and labor movements.

We should not press the analogy too far, however, because there also are important differences between the civil rights and industrial relations problems which require imaginative policies and new procedures. The race problem has many more noneconomic dimensions, and it is difficult to see how negotiations between civil rights organizations and business firms can be regularized as they were in the industrial relations field. When confronted with competing demands for union recognition, for example, it is possible to settle the conflict by holding representation elections. But in cases where civil rights groups demonstrate against business firms to get more jobs, it sometimes is difficult to determine who speaks for Negroes, making it difficult for demonstrations to lead to fruitful negotiations.

NEGRO EMPLOYMENT PATTERNS

Although an increasing proportion of Negroes are in the white collar and skilled categories, Negroes still are concentrated disproportionately in unskilled, menial occupations, are rarely promoted to supervisory positions over whites, and have occupied skilled jobs mainly in Negro communities or occupations traditionally reserved for Negroes. In 1962, for example, only 16.7 per cent of nonwhites but 47.2 per cent of whites were in white collar occupations. Other noticeable differences in the patterns are the much higher proportion of nonwhite farm and service workers and the lower proportion of nonwhite foremen and craftsmen. However, the National Planning Association's projections shown in Table 1 suggest a gradual reduction of these differences by 1972.

Significant gains were made by nonwhites in the 1955-1962 period in such professional categories as hospital, medical, and other health services, welfare and religious institutions, and business and repair services. The relative increase of nonwhites in these occupations was 70 per cent, about twice that of whites. Nonwhites also have gained relatively faster than whites in the educational services field and in government employment.[7]

Tables 3 and 4 show the relative changes in the distribution of white and nonwhite males between 1940 and 1960. The influence of the sustained period of wartime labor shortages on nonwhite males is shown in Table 4. The nonwhite proportion of total male employment increased in every category except farming during the war. Similarly, in every case except craftsmen, foremen, operatives and kindred workers, nonwhite proportions declined after the war.

Tables 5 and 6 indicate some of the changes in the skilled trades categories between 1950 and 1960 by regions. Nonwhites increased at a slightly faster rate than whites (29 per cent as compared with 28 per cent) in the South for all of these categories, but increased much faster than whites in the non-South (69 per cent as compared with 24 per cent). These overall results undoubtedly reflect the influence of migration of skilled nonwhites out of the South as well as the improvement in their positions in the non-South. These tables also suggest the importance of the supply of Negro labor as a factor in job opportunities. For example, Negro construction craftsmen in the South have been sufficiently numerous to supply the needs of contractors who are boycotted by whites and have therefore been able to protect their positions. Nonwhite construction craftsmen increased their proportion in the South from 10.19 per cent to 11.37 per cent and 65.2 per cent of nonwhite construction craftsmen resided in the South in 1950 as compared with 67.2

per cent in 1960. The proportion of all nonwhite craftsmen residing in the South declined from 55.3 per cent in 1950 to 48.6 per cent in 1960. The proportion of all nonwhites living in the South declined from 64 per cent to 57 per cent between these dates.

Expected Changes in Nonwhite Employment by 1972

Some of the main characteristics of the expected change in employment by 1972 are as follows:

	White (Millions)	Nonwhite (Millions)
Total change	12.5	1.8
Change in age 25-54	4.5	1.0
Change in Females	4.2	.8
Change in Males	8.3	1.0
Change in Blue Collar Workers	1.5	.4
Change in White Collar Workers	10.7	.9
Change in Service Workers	1.6	.5
Change in Farmers	– .7	– .1

Tables 7 and 8 contain other projections. It will be observed that significant differences are expected in the 25-54 age bracket. Over 50 per cent of the nonwhite, but only 25 per cent of the white, increase is expected to be in this age group.

Incomes and Participation Rates

Although Negroes have improved their income positions over the long run, depressed economic conditions during the 1950's and 1960's eroded the Negro's overall economic position relative to whites faster than it was improved by migration out of agriculture, falling racial barriers, and better training and education. Negroes had improved their median family incomes to 56.8 per cent of whites at the postwar relative high in 1952, as compared with 51.2 per cent in 1958 and 53 per cent in 1962. In order to maintain even these relative positions, however, nonwhites have had a larger number of wage-earners per family than whites. The civilian labor force participation rates in 1962 were 60.0 per cent for nonwhites and 56.1 per cent for whites. Significantly, the nonwhite male participation rate (76.4 per cent) was *lower* than the white male rate (78.6 per cent), but the nonwhite female rate (45.6 per cent) was much higher than the white female rate (35.6 per cent). The participation rates for both nonwhite males and females were higher in 1948 (84.8 per cent and 44.4 per cent) than the rates for whites (84.2 per cent and 30.6 per cent). These rates tend to support the argument by some observers that much of the unrest in Negro communities is attributable to the deterioration in the economic opportunities of Negro males.

The Problem of Unemployment

The deterioration in the nonwhite employment picture after 1953 is indicated by the following unemployment rates:

	Per cent White	Per cent Nonwhite
1951	2.8	4.8
1952	2.4	4.6
1953	2.3	4.1
1954	4.5	8.9
1955	3.6	7.9
1956	3.3	7.5
1957	3.9	8.0
1958	6.1	12.6
1959	4.9	10.7
1960	5.0	10.2
1961	6.0	12.5
1962	4.9	11.0
1963	5.1	10.9

Source: U. S. Dept. of Labor, Bureau of Labor Statistics.

Table 9 shows that unemployment rates for nonwhites were generally over twice those of whites but that the rates varied with occupations for both racial categories.

Is Negro Unemployment Structural or Cyclical?

Although unemployment rates of nonwhites are about twice those of whites, and have increased markedly since 1953, between 1956 and 1963 nonwhite unemployment did not increase relative to total unemployment or as a proportion of total unemployment, as indicated by the following figures:

	Ratio of unemployment in each group to national unemployment rate		Percentage of total national unemployment in each group	
	White	Nonwhite	White	Nonwhite
1956	.87	1.98	78.5	21.5
1959	.88	1.95	78.8	21.2
1962	.87	1.97	78.1	21.9
1963	.89	1.91	78.8	21.2

Source: R. A. Gordon, "Has Structural Unemployment Worsened," *Industrial Relations,* May 1964, p. 71.

Actually, these figures, which are selected for years which minimize the importance of the business cycle, show that nonwhite unemployment rates *improved* slightly relative to the totals between 1956 and 1963, suggesting that the *increases in* Negro unemployment rates are more cyclical than structural. This does not mean, of course, that the higher rates in 1956 and 1963 were not due to structural factors, or that we would get the same results if we compared 1953 with these other years. In addition, unemployment of nonwhite teenagers increased by about 60 per cent between 1955 and 1962 as compared with only 30 per cent for white teenagers.

Negro Employment and Economic Growth

In recent years, Negro unemployment rates seem to change at about twice the rate of total unemployment, whether the latter is rising or falling. With respect to longer trends, a recent study of Negro and white employment patterns during economic development found no relationship between changes in Negro female and total employment but concluded:[8]

> In expanding fields Negro male employment has tended to grow at a faster rate than white male or total employment. . . . Even in slowly growing fields the employment of Negro men has nevertheless tended to increase at a faster rate than total employment or that of white men. . . . In rapidly declining fields, however, employment of Negro men has tended to decline more rapidly than that of white men both nationally and in the South.

This suggests that Negroes would gain relatively from sustained growth as well as full employment. If the general unemployment rate could be reduced to 4 per cent, the nonwhite rate might be cut to less than 8 per cent. And if this rate could be sustained while the rate of economic growth increased and measures were taken to upgrade nonwhites, the income and employment gap between whites and nonwhites could be narrowed still further.

Factors Responsible for Racial Employment Patterns

Although the patterns of racial employment are relatively clear, it is not as easy to determine the factors responsible for these patterns. This is because the patterns are due to a complex of interrelated causes, in addition to racial discrimination, making it very difficult to determine the contribution to the total pattern made by each factor. However, although it is not possible to assign precise weights to each of these causes, the main factors responsible for the total pattern are discernible.

An important impediment to the Negro's ability to improve his occupational position is undoubtedly his easy identification and the image of inferiority stamped upon him by slavery. Not having worked in a variety of skilled, technical operations, Negroes have become stereotyped for certain jobs by employers, white workers, and even themselves. Since the Negro has been regarded as inferior by many whites, those who would perpetuate a feeling of superiority for their crafts or occupations often seek to exclude Negroes.

Negroes also are restricted in their employment opportunities by a host of cultural and social factors. Since Negroes usually live in segregated neighborhoods, they rarely learn about jobs with few or no Negroes in them, and they apply for the kinds of jobs they know they can get. Since aspirations are conditioned by one's associates, few Negroes are motivated to apply for jobs from which they have been excluded.

Negroes also are prepared inadequately through education and training to compete on an equal basis with whites. While the educational level of nonwhites is improving, the median is still 2.6 years below that of whites. Since education is related to income, the Negro's position is in some sense self-perpetuating. The median incomes of heads of families and their educational attainments in 1961 were as follows:

Education	White	Nonwhite	Ratio of Nonwhite to White (Percentages)
Elementary	$4,378	$2,539	58.0
Less than 8 years	3,656	2,294	62.7
8 years	4,911	3,338	68.0
High school	6,186	3,863	64.2
1 to 3 years	5,882	3,449	58.6
4 years	6,390	4,559	71.3
College	8,288	6,444	77.8
1 to 3 years	7,344	5,525	74.2
4 years or more	9,315	7,875	84.5

Source: U. S. Bureau of the Census.

These figures indicate that, as a general rule, the ratio of nonwhite to white income increases with the level of education.

The percentage educational distributions of whites and nonwhites for various years were as follows:

Education	White				Nonwhite			
	1952	1957	1959	1962	1952	1957	1959	1962
Elementary:								
Less than 5 years	5.2	4.3	3.7	3.3	26.7	21.2	17.9	15.5
5 to 8 years	29.3	25.8	23.6	21.4	38.7	34.9	34.3	29.8
High School:								
1 to 3 years	18.7	19.0	19.4	18.8	15.9	19.3	20.6	23.2
4 years	28.3	30.8	32.0	33.5	10.8	14.8	15.8	21.0
College:								
1 to 3 years	8.8	9.0	9.7	11.3	3.7	3.9	4.5	5.7
4 years or more	8.5	9.7	10.2	11.8	2.6	3.4	3.9	4.8
Median years completed	11.4	12.1	12.1	12.2	7.6	8.4	8.7	9.6

Source: U. S. Bureau of the Census and Bureau of Labor Statistics.

These figures reveal a great decline in the proportion of nonwhites who had less than five years of education and a significant increase in the proportion of nonwhites attending high school.

While there are some examples of improved job opportunities for Negroes, for some reason nonwhite high school graduates do not fair as well as white dropouts. For example, 15 per cent of white male dropouts, but only 10 per cent of Negro boys *who graduated* from high school in October 1962 found employment as craftsmen or kindred workers.[9] Moreover, nonwhites have much more difficulty being absorbed into the labor force. Of the white high-school graduates who last attended school in 1959, for instance, only 5.3 per cent remained out of work 2.5 years after graduation as compared with 14.5 per cent of nonwhite high school graduates. Of the 1959 dropouts, 10.2 per cent of the whites and 18 per cent of the nonwhites were unemployed two years later.[10]

The Negroes' inadequate vocational and apprenticeship training also tend to perpetuate their employment in traditional jobs. In the South it has been customary to have segregated vocational schools where Negroes were trained only for traditional occupations. While there are some excellent Negro vocational training schools associated with Negro colleges, many Negroes are barred from these as well as apprenticeship programs because they are not high school graduates. Moreover, even the graduates of these schools have not been able to acquire additional apprenticeship training to become journeymen because of discrimination in apprenticeship training programs.

The National Institute of Labor Education has launched a Youth Employment Program in cooperation with the Department of Labor and various union-management apprenticeship programs to prepare dropouts for apprenticeships. Such programs are underway in Newark, the District of Columbia, Baltimore, and Norfolk. Although it is too early to evaluate these programs, they have to date produced many problems but some hopeful results. It would be a mistake, however, to expect apprenticeship training to do very much to overcome the occupational disadvantages of Negroes. There has probably been a tendency for civil rights groups to exaggerate the importance of this type of training because of the virtual absence of Negroes from many apprenticeship programs and the fact that apprenticeship, while not too significant in the overall manpower picture, is the gateway to employment in many of the skilled trades, particularly in the construction industry.

It could be argued, however, that the present level of apprenticeship training is inadequate for the manpower needs of the future. Apprenticeship training is important for the expanding skilled trades because vocational training alone has rarely given students sufficient practical and theoretical training to equip them to become well-rounded craftsmen. Apprenticeship also has important advantages over other means of acquiring skilled trades (armed forces, "picking-it-up," and upgrading within plants) and assumes greater importance as technological innovations increase the need for well-trained craftsmen. In the past, the United States has relied heavily on immigrants as a source of skilled manpower. But, with the relatively high levels of prosperity in many European countries, this flow of skilled workers has virtually dried up.

Although it is estimated that apprenticeship training will furnish a relatively small proportion of the projected needs of skilled building tradesmen by 1970 unless something is done to increase the number of apprentices, perhaps as many as 7,000-8,000 Negroes a year could complete apprenticeship training programs if they attained the same relative proportion as whites. Apprenticeship training furnished only 70,000-80,000 of the 500,000 skilled craftsmen needed each year during the 1950's and 1960's.[11]

Management Attitudes

Although unions have important influences in employment patterns in some of the building trades and other casual occupations, management usually makes the basic employment decisions. Management prejudices and stereotypes will therefore influence the extent to which Negroes can be upgraded within plants and are hired in traditional or nontraditional categories. There is ample evidence that management has usually considered Negroes to be suitable only for certain low-status jobs. For example, one management official, sympathetic to the upgrading of Negroes, described a common employer view as follows:

> Negroes, basically and as a group, with only rare exceptions, are not as well trained for higher skills and jobs as whites. They appear to be excellent for work, usually unskilled, that requires stamina and brawn – and little else. They are unreliable and cannot adjust to the demands of the factory.[12]

Other observers have confirmed the prevalence of this attitude.[13]

In addition to its prejudices, however, management has practiced racial discrimination because of fears of reaction from white workers and the white community.

The Negro and Organized Labor

In discussing the effects of unions on Negro employment opportunities, it is necessary to distinguish the various kinds of unions and the forms of racial policies adopted by each.[14] Since they control the supply of labor in their trades, for example, craft unions can influence Negro employment opportunities by barring them from their unions and imposing closed shop conditions which require the employer to get his labor from the union, so if the union bars Negroes from membership they are effectively barred from the unionized sector of the trade. In some cases, there have been "gentlemen's agreements" that Negroes would be permitted to work only in certain areas of a trade, such as in Negro neighborhoods or on lower-paying jobs, while unionized whites retained the more desirable jobs. This has been the pattern among many building trades unions, for example, where craft unions like the Plumbers, Electricians, and Sheet Metal Workers have either barred Negroes from membership or restricted them to certain kinds of work. Railroad brotherhoods have had the most rigid forms of discrimination. The historical pattern has been for these unions to bar Negroes from membership and from the jobs.

Although no precise statistics are available, there have been some significant changes in union racial practices since the 1930's. Formal racial restrictions in constitutions or rituals have declined from at least twenty-two in 1930 to only two in 1964. In addition, in most of the major cities outside the South and in a few cases in the South some Negroes have gained entry to unions from which they were excluded by informal means. Of course, in most of these cases union and civil rights leaders are likely to disagree over the significance of the changes that have taken place.

There has also been a great decline in the number of segregated local unions. A number of unions have moved to merge segregated locals in the South under pressure from the President's Committee on Equal Employment Opportunity and in the North because segregation violated the state FEP laws. The National Labor Relations Board has also taken measures to discourage segregated locals by holding segregated job quotas to be unfair labor practices and by holding that where segregation exists an existing contract would not bar a new representation election. In general, therefore, in the last ten years segregated local unions have become relatively unimportant.

Job Segregation

Industrial unions were more concerned with the exclusion of Negroes from employment in manufacturing industries and with job segregation within those industries than with exclusion or segregated locals. Although unions were not responsible for these employment patterns, because they existed before industrial unions were significant, white workers have used the strike threat to perpetuate job discrimination.

Union Efforts to Abolish Discrimination

It would be a mistake to conclude that the impact of unions on Negro job opportunities has been mainly negative, because on balance the union movement probably has done much more to promote than to retard Negro job opportunities. At the national level, the labor movement has contributed substantially to the fight for more equal opportunities for Negroes and has been indispensable in the movement for civil rights, improved education, and other social legislation. Moreover, the AFL-CIO, and its predecessors, the AFL and the CIO, adopted equalitarian racial policies. In addition, most of the CIO unions protected the Negro's employment rights after he was hired and on some occasions even sought to force employers to sign nondiscrimination agreements covering the *hiring* of workers. Nondiscrimination agreements, which existed in about one-fifth of all major collective bargaining contracts in 1961, became especially significant during the racial ferment of the 1950's and 1960's.[15] Vigorous antidiscrimination drives have been undertaken by the United Packinghouse Workers and the Retail, Wholesale and Department Store Union in the South, and nondiscrimination agreements were reached between the United Auto Workers and the Ford, General Motors, Chrysler, and American Motors companies in 1961 and between the Steelworkers and eleven major steel companies in 1964, including Armco, Bethlehem, Colorado Fuel &

Iron, Great Lakes Steel, Inland, Jones & Laughlin, Pittsburgh Steel, Republic, United States Steel, Wheeling, and Youngstown Sheet & Tube.

In addition, the mere presence of a certified union has given Negro workers rights they would not otherwise have had. Not only can Negroes sue for violation of specific contract rights, but, as will be shown later, the union is required by the courts, and more recently by the National Labor Relations Board, to follow nondiscrimination policies with respect to all workers in the bargaining unit.

Finally, unions have promoted Negro interests as a part of the very equalitarian policies upon which American unions are founded. Unions are weakened if they fail to promote equal seniority, wage and other benefits for all workers, regardless of race. Moreover, fringe benefits and the elimination of occupational wage differentials help Negroes — who are concentrated in lower job categories.

This does not mean, of course, that all labor organizations have protected the Negro's seniority rights because they realized that to do otherwise would weaken the unions. Some unions have violated the Negro's seniority rights in spite of the knowledge that this not only weakened seniority, but also gravely damaged the reputation of the whole labor movement and jeopardized the informal Negro-labor political coalitions built up since the 1930's. But the fact that discrimination *tends* to weaken seniority is a factor *undermining* discrimination by unions. Moreover, if the Negro workers' seniority rights are violated, they have a legal cause of action against the union and the employer for violating the contract.

But just as employers do not always follow merit employment practices, even though to do so might be more rational, many international unions and the federations have permitted discrimination to continue at the local level even though they were opposed to it. Since the AFL, the CIO, and the AFL-CIO were voluntary associations, they sometimes had inadequate power to compel their affiliates to comply with their equalitarian racial policies. Since much racial discrimination is at the local level, local union leaders, who are elected to their positions, have been reluctant to vigorously oppose discrimination where this might cost them their jobs. Moreover, unions, like employers, have feared that equalitarian policies would jeopardize their positions in the South.

NEGRO EMPLOYMENT AND PUBLIC POLICY

There has been a noticeable increase in public policy measures against racial discrimination in employment since the 1930's. Especially important are the Committee on Fair Employment Practices (FEPC) created by President Roosevelt in 1941, the various government contract committees created by every president since the New Deal, the FEP laws passed in twenty-five states and a number of municipalities, court rulings and NLRB decisions which require unions to represent Negroes fairly, and the Civil Rights Act of 1964. Since these measures have been discussed a great deal and their uses and limitations are relatively well known, we can limit our observations to some of their more controversial aspects.[16]

The President's Committee on Government Contracts established by President Eisenhower was used by civil rights groups to get jobs for Negroes in many cases where they had not previously been employed. But the PCGC was limited by its indirect approach through the contracting agencies and the fact that its power was restricted to recommending the revocation of contracts. There seems to have been a prevailing conviction, which proved accurate, moreover, that the PCGC really would not cause contracts to be revoked. The influence of the PCGC also was limited by the committee's lack of power over unions, because labor organizations were not parties to government contracts. Contract revocation is not an effective device in many cases because the contract frequently is as important to the contracting agency as it is to the company.

Many of these limitations also applied to the President's Committee on Equal Employment Opportunity created by President Kennedy and continued under President Johnson. However, the PCEEO took a more aggressive approach and was extended to include federally-assisted construction projects and all of a firm's activities, not just those plants with government contracts. By threatening to cancel or deny contracts to four relatively small contractors, the PCEEO created the impression that it would in fact revoke contracts. The PCEEO also was partly responsible for the adoption of nondiscrimination provisions in federal apprenticeship standards, which were put into effect in January, 1964 over the heated objections of some building trades union leaders. Finally, the so-called "Plans for Progress" (PFP) to get companies and unions voluntarily to comply with nondiscrimination programs reached areas (like unions) that were beyond the jurisdiction of the government contract provisions. As a result of these plans and the increasing militancy of the civil rights movement, many unions and employers intensified their antidiscrimination programs.

Compulsory vs. Voluntary Nondiscrimination Plans

Although they are sometimes viewed as competitive, compulsory nondiscrimination measures tend to induce and strengthen voluntary programs. There is something about the threat of prosecution that seems to make the voluntary programs work much better. There is no denying, for example, that the PFP program has produced results. There is no denying that this program has been adopted. This program originated in May, 1961, and of 91 companies reported on as of July, 1963, total employment had increased by 12.4 per cent and nonwhite employment 14.7 per cent, or by 27,180 employees.[17] In addition, PFP companies increased their employment by 60,000 between September and November, 1963, and 25 per cent of these were nonwhite. In comparable periods before the PFP program, nonwhite employment would have increased by about 3 per cent.[18] These job increases are important when it is considered that much effort is required to produce additional jobs for nonwhites.[19]

We should not conclude, however, that the voluntary programs by themselves would have produced these results. It is significant that the "voluntary" plans came at a time of increasing militancy by civil rights groups. Equally significant, all but one of the 35 largest government defense contractors in 1962 were among the first 91 companies to sign plans for progress. Indeed, defense contracts accounted for over half of the total sales for 17 of these 35 largest companies in 1962.[20] The Lockheed Aircraft Corporation, for example, had the largest volume of prime military contracts in 1962 of any U.S. company. Indeed, its award of approximately $1.42 billion dollars was 81.27 per cent of its total sales and was greater than the value of military contracts awarded in 22 states. This undoubtedly helps explain why Lockheed was willing to pioneer in the PFP program. The only one of the largest 35 defense contractors not among the first 91 companies in the Plans for Progress was Standard Oil of New Jersey, which was the 28th largest recipient of defense contracts. Standard of New Jersey's defense contracts in 1962 amounted to only $180,000, however, and accounted for only 1.89 per cent of its sales – the lowest proportion of sales of any of the largest 35 contractors.

Conclusions on State FEP Laws

Since so many other factors were at work influencing racial employment patterns besides the state FEP laws, it is difficult to determine their impact. A careful study of these laws concludes, however, that they have definitely improved the employment opportunities of minorities, particularly in places like New York, New Jersey, and Philadelphia, which have relatively well-financed and well-staffed enforcement agencies.[21] An examination of the records of these commissions reveals that they have caused many companies, unions, and employment agencies to alter their discriminatory practices and opened the door to employment in thousands of cases. Union referral systems have been regularized and a number of the most recalcitrant craft unions in the building and railroad trades have been forced to admit Negroes or abolish discriminatory provisions in their constitutions. Indeed, one of the main factors causing unions to remove the formal restrictions in their constitutions was the passage of the New York, New Jersey, and Connecticut FEP laws.

In spite of these accomplishments, however, civil rights groups have become very critical of the effects of these laws. It is significant that the racial demonstrations in Northern cities during 1963 and 1964 were in states and municipalities with the most active FEP commissions. Negroes are dissatisfied with the rate of change in racial employment patterns, partly because they probably expected too much from the commissions where the case-by-case approach is bound to produce results only slowly. Moreover, it is not always easy to prove discrimination where Negroes think it exists. Large percentages of the cases are found to be without merit. Sometimes the practices complained of were very complicated and operated to restrict employment to a particular group. Moreover, during times of growing unemployment, racial employment patterns will change very slowly because of limited changes in total employment.

The Courts

Negroes have also used the courts to overcome discrimination by unions and employers. However, most court cases have dealt with unions because, in the absence of legislation or contract provisions to the contrary, employers have had no legal obligation to follow nondiscrimination policies. The same is not true of unions, however, because they acquire legal rights and duties as a result of the National Labor Relations and Railway Labor Acts. The U. S. Supreme Court has ruled, therefore, that the Constitution imposes upon the unions which acquire the privilege of exclusive bargaining rights under these acts the duty to represent all members of the bargaining unit fairly.[22] Some federal courts also have held that employers are jointly liable with unions for the duty of fair representation,[23] and aggrieved minorities have brought suit against unions for damages resulting from violation of their legal rights. Although court action requires a great deal of time, is uncertain as to its outcome, and has rarely resulted in damages to the plaintiffs, lawsuits are valuable to aggrieved minorities as a threat to discriminating employers and unions, and injunctions have been used to make it possible for Negroes to retain their jobs.[24]

The NLRB

The disadvantage of court cases could be avoided if there were effective administrative remedies, but the National Labor Relations Board traditionally has been much more cautious than the courts in interpreting and applying its power to prevent discrimination by unions. Though the Board has entertained "... grave doubt whether a union which discriminatorily denies membership to employees on the basis of race, may nevertheless bargain as the exclusive representative in an appropriate unit composed of members of the excluded race,"[25] the Board has repeatedly permitted unions which excluded Negroes to participate in elections covering bargaining units containing Negroes.[26] Indeed, the Board ruled that

> Neither exclusion from membership nor segregated membership per se represents evasion on the part of a labor organization of its statutory duty of "equal representation." But in each case where the issue is presented the Board will scrutinize the contract and conduct of a representative organization and withdraw certification if it finds the organization has discriminated against employees in the bargaining units through its membership restrictions or otherwise.[27]

The Hughes Tool decision,[28] handed down by the NLRB the same day President Johnson signed the Civil Rights Act of 1964, raises some important questions and, if sustained in the federal courts, could have important consequences for union racial practices. Specifically reversing the NLRB's previous position, the Board ruled for the first time that a violation of the duty of fair representation is also an unfair labor practice. Previously, the NLRB had interpreted its authority in such cases as limited to the relatively weak penalty of revoking a union's certification. But if the union's violation of the duty of fair representation is also an unfair labor practice, the Board can issue cease and desist orders enforceable in the federal courts. The Hughes Tool theory would in effect give the aggrieved person an administrative remedy for the duty of fair representation, making it no longer necessary for him to seek relief in the courts.

The Civil Rights Act of 1964

If it is sustained by the U. S. Supreme Court, the Civil Rights Act of 1964 will undoubtedly prove to be the most important antidiscrimination act yet passed. Title VII of the act bans discrimination in employment because of race, color, religion, national origin, or sex. Title VII will become effective one year after July 2, 1964, and covers unions and enterprises in industries affecting commerce, including employment agencies, union hiring halls, employers with 100 or more employees, and unions with 100 or more members. By 1968, minimum coverage will be reduced to 25 employees or members. The act is administered by a bipartisan Equal Employment Opportunities Commission (EEOC), established to investigate and adjudicate complaints.

Evaluation

Although the Civil Rights Act could have important effects in the South, it is likely to have limited effect elsewhere. In the first place, the Hughes Tool doctrine, if sustained by the Supreme Court, in many ways gives more effective relief for unionized employees than the Civil Rights Act. With all of the uncertainties of the EEOC procedures, an aggrieved individual would probably get faster relief through the NLRB, which does not have to wait for one to three years to take action. If the Hughes Tool doctrine is not sustained, however, the Board's power would be limited to the revocation of certification, which is not a very potent remedy. The law also will have apparently little influence in those states and municipalities which have antidiscrimination laws.

SOME PUBLIC POLICY CONTROVERSIES

Are antidiscrimination laws necessary?

Some observers who claim to favor merit employment nevertheless feel that legislation is unnecessary because the market tends to eliminate discrimination and because laws interfere with the employer's ability to make rational choices. For instance, Milton Friedman argues that "it is a striking historical fact that the development of capitalism has been accompanied by a major reduction in the extent to which particular religious, racial, or social groups have operated under special handicaps in respect of their economic activities; have, as the saying goes, been discriminated against."[29] This is true, according to Friedman, because ". . . there is an economic incentive in a free market to separate economic efficiency from other characteristics of the individual."[30] Professor Friedman therefore believes that FEP legislation "clearly involves interference with the freedom of individuals to enter into voluntary contracts with one another."

If Professor Friedman is talking about an idealized world which does not exist, we may grant his conclusions. But if he means by "historical fact" that such an idealized world exists, it is difficult to agree with him. Indeed, he recognizes that capitalists might discriminate against Negroes not because of prejudice, but because they "may simply be transmitting the tastes of the community." Thus, in a perfectly rational economic world, it is possible that noneconomic considerations, like social pressures, might counteract economic tendencies. We might grant, for example, that there is a long-run tendency for industrialism or a market economy to eliminate racial discrimination. But on grounds for legislation one might still be dissatisfied with the *rate* at which these market forces produce equality. Even assuming that employers have no prejudices and are motivated entirely by *pecunious rex,* it might be that employers are blocked from making more rational economic decisions because they fear community reaction or because they see no compelling reason to take a chance when there are plenty of white workers available. In this case, obviously, an individual employer would be unwilling to adopt equalitarian practices for fear of being boycotted by the community. But if the law forced all employers to take this action, there would be no possibility of boycott. In this case, far from being a force for "irrationality," the law would free the employer from irrational community reactions by permitting him to neutralize community pressure effectively. Of course, if we lived in a perfect world where ". . . the appropriate recourse of those of us who believe that a particular criterion such as color is irrelevant [was] to persuade our fellows to be of like mind, not to use the coercive power of the state to force them to act in accordance with our principles," then laws would indeed be unnecessary. But those of us who believe that there are many decisions that the market is not likely to make with sufficient rapidity or precision, and that rational discourse is not likely to persuade many bigots to change their ways, will favor legislation to achieve this end. Indeed, many of us are convinced that attitudes are more likely to be molded by actions than vice versa.

This is not to argue, however, either that legislation will do much by itself to change racial employment patterns or that the implementation of laws cannot produce more harm than good. Unless proper safeguards are imposed, for example, it might be possible for innocent employers to be forced by civil rights agencies to hire unqualified Negroes. There are some employers who would conclude that it would be better to hire an unqualified worker than to suffer the embarrassment of public hearing. If we can judge by the state FEP commission, however, there is little reason to believe that this will be an important problem.

With respect to the Civil Rights Act of 1964, a number of safeguards have been included to protect the interests of those charged with discrimination. Sec. 706 (g) provides that a federal district court can enjoin respondents only if it finds that they have "intentionally engaged . . . in an unlawful employment practice charged in the complaint." The same section also provides that the court cannot require the reinstatement of any individual, or award back pay to him, if he is discharged for some reason other than discrimination because of race, color, religion, sex, or national origin. The act also makes exceptions where employment because of religion or national origin is a bona fide business necessity. Section 703 (h) provides that it shall not be unlawful for an employer to use seniority, merit, or testing systems in order "to apply different standards of compensation, or different terms, conditions or privileges of employment" where these are not intended or designed to be used for discriminatory practices forbidden by the act.

The Civil Rights Act also protects the employer by making it clear that "nothing in this title shall be interpreted to require any employer, employment agency, labor organization, or joint labor-management committee . . . to grant preferential treatment to any individual or to any group because of race . . . on account of an imbalance which may exist with respect to the total number or percentage of" such persons hired, referred, or accepted into membership. Clearly, however, the act does not *prohibit* preferential treatment, and therefore any protection given to employers by the act might not prohibit coercive tactics to require racial quotas.

Section 705 (g) (4) gives the Equal Employment Opportunity Commission power "upon the request of any employer, whose employees or some of them, or any labor organization, whose members or some of them, refuse or threaten to refuse to cooperate in effectuating the provisions of this title, to assist in such effectuation by conciliation or such other remedial action as is provided by this title." This "other remedial action" presumably includes court orders against the offending individuals.

Although it remains to be seen how these provisions are interpreted, our tentative conclusion is that the Civil Rights Act probably contains adequate safeguards for respondents. Indeed, respondents are much more carefully protected by the act than by many of the state laws — and there apparently have been few complaints concerning the latter. We noted that an unprotected area for employers is the threat of coercive activities by civil rights groups even though the employer is in complete compliance with the law. And there is a possibility that even this activity would fall within the scope of the act. It might be argued, for example, that civil rights groups are labor organizations within the act's definition: ". . . any organization of any kind, any agency, or employee representation committee group, association, or plan so engaged . . . which exists for the purpose, in whole or in part, of dealing with employers concerning grievances, labor disputes, wages, rates of pay, hours, or other terms or conditions of employment . . ." Certainly some civil rights groups undertake to accomplish these things for minorities and would therefore fall within the scope of the act. Section 703 (c) (3) makes it an "unlawful employment practice" for a labor organization "to cause or attempt to cause an employer to discriminate against an individual in violation of this section," and Section 703 (c) (2) makes it an unlawful employment practice for a labor organization to limit the employment opportunities of any individual "or otherwise adversely affect his status as an employee or as an applicant for employment" because of his race, etc. Thus, if civil rights organizations insisted on activities that would cause employers to discriminate against whites, they might violate these provisions of the law, though we might here be encroaching on that prerogative of judges to stretch the law to make it say what we would like for it to say.

Relative Importance of Nondiscrimination Policies

Although major attention has been given to antidiscrimination legislation, it would seem that measures to improve the operation of the labor market and promote more rational manpower policies would, at this juncture, do more to improve Negro job conditions. This is not to infer, of course, that no attention should be paid to antidiscrimination laws and policies. Nor do we mean to infer that discrimination is no longer a problem. Our concentration on "success stories" among the larger and more conspicuous unions and employers – who are also likely to depend heavily on defense contracts – should not blind us to the prevalence of discrimination in every section of the country as evidenced by the slowness with which the labor market absorbs even educated Negroes. At the same time, however, at the national level the policy of no discrimination in employment has been established, and there are many complaints from unions and employers concerning the shortage of qualified Negro applicants. If we are to prevent token breakthroughs in employment from remaining just that, it will be necessary to improve the operation of the labor market through better job information and projections, improved public education, better job counseling, and measures to overcome unemployment and promote economic growth.

Retraining Programs

Since they are designed to aid workers who are unemployed because of technological and long-term economic changes, the Manpower Development and Training Act (MDTA) and Area Development Act (ARA) programs offer some hope for improving the lot of minority groups. Although not as many nonwhites as whites were being trained for the higher-paying jobs in 1963, Table 11 reveals that nonwhite representation was higher in the MDTA clerical, sales, skilled, and semiskilled categories than nonwhite employment distribution. The proportion of nonwhites in training under the MDTA program in June 1963 was 20.3 per cent, which was about twice their representation in the work force and about equal their proportion of the unemployed.

Nevertheless, the MDTA and ARA programs have certain limitations from the standpoint of improving Negro employment opportunities. The programs are administered in cooperation with the states, and the requirement that programs be integrated apparently has restricted the participation of several Southern states with large Negro concentrations. In 1961, for instance, the most ambitious single ARA plan undertaken in its first two years — a program to train some 1200 equipment operators in the Yazoo Delta of Mississippi, where over 50 per cent of the males were unemployed — had to be canceled for this reason. Louisiana refused to cooperate for the first two years of the program.[31]

In addition, very few Negroes actually have been trained under these programs. By June, 1963, for example, after about a year, only 43,491 trainees had enrolled in MDTA programs, 8,700 of whom were nonwhites. Of course, it could be that more trainees will be enrolled as the program matures, but this will not make much of an impact on the 750,000 nonwhites who are unemployed. Indeed, since nonwhites have had more difficulty getting placed than whites when they complete retraining, not all of these 8,700 trainees will get jobs. In a hospital training program in San Francisco, for instance, 89 per cent of whites but only 63 per cent of nonwhites who completed the course were able to find jobs. Similar results were found in a study of the retraining program launched by Armour and Company, the Packinghouse Workers, and the Amalgamated Meat Cutters in connection with the closing of the company's Fort Worth, Texas plant in 1962. Although placement from the program was aided by an unemployment rate of less than 5 per cent, and although retrainees had many fewer unemployment experiences than nonretrainees, of the Negro men who finished training by November, 1963, 60 per cent were in jobs unrelated to their training, as compared with only 20 per cent for white male retrainees.[32] On the average, however, Negroes and Latins fared better than whites in acquiring jobs after they were retrained, although the wages of Negroes were significantly below those of whites. This suggests that, although Negroes will have more difficulty getting jobs than whites after they are trained, retraining helps them get some kinds of jobs even though their wages will be less than those of white retrainees.

Programs which do not bar participation of workers because of education or aptitude will obviously do more to reduce nonwhite unemployment. The impact of the MDTA program on unemployment is therefore limited because budget restrictions have caused it to concentrate on training younger, better-educated workers.[33]

Public vs. Private Job Training

Although public *education* programs are very important, public *job training* is likely to be less significant than private programs. The President's 1963 Manpower Report to the Congress suggests, for example, that well over three million workers were in private training programs in the spring of 1962. These programs naturally place heavy emphasis on training for specific jobs and are designed for the most capable and trainable workers. Nonwhites will therefore do much more to improve their job chances if they seek to gain greater participation in these private training programs than by concentrating on public programs. Since private training is likely to be much more important than public programs, public policy measures might be designed to encourage the growth of, and nonwhite participation in, these private programs, perhaps through tax relief or outright subsidies. Public programs also might be designed to supplement private programs by training older, less well-educated workers and by encouraging the extension of general education.

Wage Policy

Another problem which should be studied very carefully by civil rights groups is the effect of wage policy on minority employment opportunities. Although the evidence is incomplete, it suggests that as long as employers are prejudiced against Negro workers, equalization of wages will tend to cause unemployment among Negroes. It is possible, however, that protection through nondiscrimination programs or collective bargaining can prevent unemployment which results from wage equalization.

The effect of uniform minimum wages on minority employment opportunities also deserves careful study. Because they are concentrated in low-wage industries, Negroes probably have experienced more unemployment than whites because of legal minimum wages. Although the evidence suggests that federal minimum wage laws have caused unemployment, the problem has not been too great because the minimum rates have been relatively low and have gone into effect when employment was rising. Now, however, when the rates are relatively high and unemployment is a problem, further extension of minimum wages might lead to more unemployment among low-wage workers. More flexible, rather than uniform, minimum wages would probably help the unemployment problems of older, less-educated workers. Higher minimum wages, at this juncture, probably would worsen rather than help the economic conditions of nonwhite workers.

Preferential Treatment for Disadvantaged Minorities

Some civil rights groups advocate that minorities be given preferential treatment to compensate for the cumulative influences of discrimination. These demands are based upon the realization that, even with nondiscriminatory employment policies, Negroes would not be able to change their employment patterns very rapidly.

Although preferential treatment is usually condemned by employers, union leaders, and most government agencies, it has been surprisingly common. Indeed, when Negroes have brought pressures for more jobs or official positions in unions, formal or informal racial quota arrangements have seemed the logical compromises to settle these disputes. The federal government also has sanctioned quota systems in the past and has at least left the impression that it expects government contractors to give preferential treatment to minorities. For example, in the Labor Department's apprenticeship training standards, it is specified that one of the nondiscriminatory policies that could be adopted is "the taking of whatever steps are necessary, in acting upon application lists developed prior to this time, to remove the effects of previous practices under which discriminatory patterns of employment may have resulted." Although the standards specifically bar quota systems, construction union critics of these standards insist that they contemplate preferential treatment in the selection of nonwhites. Some employers also argue that the PCEEO'S standards for compliance strongly imply that preferential treatment should be given nonwhites in order to improve the manpower profiles which they are required to submit annually as "proof of affirmative action." It would also be very unlikely that, in the absence of preferential treatment, nonwhite blue collar employment by government contractors would have increased, while total blue collar employment was declining, as it did between 1961 and 1962. In addition, companies signing Plans for Progress with the PCEEO agree to "vigorously seek qualified minority group applicants for all job categories, and . . . make particular efforts to increase minority group representation in occupations at the higher levels of skill and responsibility." During the construction of the National Aeronautics and Space Administration's Michaud plant in New Orleans, one of the prime contractors, the Boeing Company, announced in 1963 that it was importing Negro craftsmen from the North because it was bound by its government contract to "maintain balance between the races."[34] The PCGC also checked on quota systems to determine whether discrimination existed in Atomic Energy Commission construction work in Tennessee.

The Legality of Preferential Treatment of Minorities

Although quota systems seem to have been specifically banned by most state antidiscrimination commissions and by the NLRB, the Civil Rights Act of 1964 is not clear with respect to the legality of these practices. As noted earlier, the act simply declares that preferential treatment and quota systems are not required by Title VII. Presumably preferential treatment would be legal, though not required. However, in order to be consistent with other provisions of the act, preferential treatment which discriminates against whites presumably would be unlawful, but preferential treatment which does not deprive whites of established rights would probably be lawful.

The NLRB's recent decision in the Brownsville ILA case dealt with the legality of a racial quota system. In this case, which involved Locals 1367 (white) and 1368 (Negro) of the International Longshoremen's Association in Brownsville, Texas, the NLRB ruled that by maintaining a quota system which distributed work 75-25 among Locals 1367 and 1368 "based on race and union membership" and by prohibiting Negro and white gangs from working together, the South Atlantic and Gulf Coast District of ILA and Local 1367 "failed to comply with their duty as exclusive bargaining representative to represent all employees in the bargaining unit fairly and impartially and thereby violated Section 8 (b) (1) (A) of the Act."[35] The Board's majority relied upon their reasoning in the Hughes Tool case.

Quota systems have existed among Southern longshoremen since the Civil War, and have been buttressed by racially segregated local unions. On the Gulf and South Atlantic ports, longshoremen's jobs have been held exclusively by Negroes, but in New Orleans and the Western Gulf ports there are segregated locals and racial quota systems. With few exceptions, clerks' jobs are held exclusively by whites.

Negro longshoremen have been able to retain their positions mainly because they have had sufficient supplies of labor to prevent whites from freezing them out. The international union apparently has used its influence to maintain racial balance.

Although quota systems preserve some jobs for Negroes, many colored longshoremen have inferior job conditions relative to whites. During the 1962-1963 contract year, for example, the 9,930 nonwhite dock workers in New Orleans worked an average of only 537 hours, while 3,296 whites worked an average of 863 hours. About half of the nonwhites, but only a fifth of whites, worked less than 100 hours. Over 10 per cent of whites, but less than one per cent of nonwhites, worked 2000 hours or more. In longshore jobs, 5,977 nonwhites worked an average of 529 hours while 1,430 whites worked an average of 908 hours. Although all of the 2,176 carloaders were nonwhites, the 1,110 wharf clerks were whites.

While nonwhite longshoremen worked shorter hours on the average, they worked a total of more hours than whites, as indicated by the following:

	White	Nonwhite
Total hours worked in all jobs	2,844,448	5,332,410
Total hours in longshoring jobs	1,298,440	3,160,833

Thus, nonwhites worked 65 per cent of all jobs and constituted about 75 per cent of all employees. Nonwhites got 71 per cent of the general longshoremen's jobs and had about 81 per cent of the employees. Since the Negro ILA locals in New Orleans control their own memberships, they could increase the average number of hours worked, though there are many more Negroes than whites looking for work as longshoremen. It might also be observed that the Brownsville, Texas complaint to the NLRB in the case discussed above was not against the quota system but for an increase in the share of jobs going to Negroes.

Conclusions on Preferential Treatment of Minorities

Preferential treatment for Negroes is opposed, of course, because it might deprive whites of rights they already enjoy and therefore would be discrimination in reverse. But *special* programs for Negroes need not take the form of quota systems and need not deprive whites of existing rights. For example, companies and unions that have not recruited among Negroes in the past and that have no Negro employees or members might make special efforts to recruit

Negroes or to help them acquire training. This would be special treatment to include Negroes in the recruitment pattern, but it would not be preferential treatment because it would extend to Negroes benefits which whites already enjoy.

Preferential treatment of Negroes can also be conducted in such a way as not to deprive whites of existing rights. For example, if a Negro and a white applicant were about equally qualified, it would be preferential treatment if the Negro were hired in order to advertise to the Negro community (or government agencies) that the company had lowered its racial barriers. In this case, the white applicant was not deprived of pre-existing rights. Of course, what most critics apparently have in mind is the form of preferential treatment where Negroes are hired regardless of their qualifications when more qualified whites are available, or when Negroes actually displace whites. The latter form of preferential treatment understandably leads to racial unrest. Preferential treatment which destroys the pre-existing rights of whites is based on the theory (in my judgment, mistaken) that whites as a race are collectively responsible for the disadvantages suffered by Negroes and that whites should be penalized now in order to compensate Negroes for their present historically-conditioned disadvantages. It seems to be just as unfair to hold all whites responsible for the Negroes' conditions as it is to consider all Negroes inferior to all whites.

Although the whole question of preferential treatment needs to be studied at greater length, especially some detailed studies of situations where preferential treatment has been used, the available evidence seems to support the following tentative conclusions:

1. Quota systems have usually been established as a result of pressure by Negroes to get jobs, which were sometimes accompanied by race riots, and have been maintained only because Negroes have had sufficient economic power to enforce the quota requirements or have been able to get help from the federal government to enforce quotas on government projects.

2. Quota systems are usually informal and are used mainly in casual occupations. They obviously would destroy seniority systems and are rarely used where seniority applies. However, in the South quota systems have frequently supplemented seniority arrangements by informal "gentlemen's agreements" over the division of jobs.

3. Although quota systems apparently have given Negroes inferior job opportunities on the average, these arrangements have made it possible for Negroes to get jobs they would have had difficulty retaining in the absence of quotas imposed by unions or the federal government. However, it seems that racial quotas are not justified where nondiscrimination policies have been established.

4. In those very rare cases where a Negro and a white worker are equally qualified, hiring the Negro might conceivably be considered discrimination against the white worker because of his race. However, the white worker is not deprived of an established right, although a technical difference might arise where the employer advertises for workers as compared with the intentional recruitment of qualified Negro workers. In this case, it is proposed that the decision be left entirely to the employer.

CONCLUSIONS

In conclusion, it seems to me that Negro job opportunities depend mainly on general economic and technological forces. Although discrimination will remain an important problem for some time, at this juncture discrimination, as well as other structural defects, are more like bottlenecks in the mainstream of the economy than fundamental determinants of job patterns. It is important to keep the stream open, but it is more important to keep it flowing freely. The flow will be determined mainly by the general level of economic activity and by the efforts made by individuals to prepare themselves to take advantage of the opportunities opened up. The supply of labor is important because, to a degree, a supply of trained workers can create their own demand. There are things governments can do to keep the economy moving at a healthy pace, but the basic decisions are likely to be made by private employers and workers who are motivated to create, prepare for, and seek jobs. The most effective government policies will therefore be those which influence private decisions through incentives and penalties, although the former will be more important than the latter. Public policy must encourage the creation of jobs as well as the training of workers qualified to fill those jobs. But in those cases where workers cannot be made to fit jobs, it will be necessary to create jobs to fit the workers. Surely there are enough things that need to be done in the way of public improvements that employment can be created for workers who are untrainable.

Finally, it is hard to create jobs and even harder to create jobs for Negroes. The prospects are not good, but there are a lot of things that can be done to make them better.

APPENDIX TABLES

TABLE 1

OCCUPATIONAL DISTRIBUTION OF THE CIVILIAN LABOR FORCE BY COLOR 1957, 1962, AND PROJECTIONS FOR 1972 (PERCENTAGES)

Occupational Group	1957		1962		1972	
	White	Non-white	White	Non-white	White	Non-white
White collar workers	43.9	13.3	47.2	16.7	53.4	24.2
Professional, technical	10.7	4.0	12.6	5.3	17.0	8.7
Managerial, props.	11.2	2.4	11.9	2.6	12.1	2.9
Clerical	15.1	5.5	15.8	7.2	16.8	10.4
Sales	6.9	1.4	6.9	1.6	7.5	2.2
Blue Collar Workers	37.9	41.1	35.3	39.5	31.0	35.7
Craftsmen, foreman	14.3	5.4	13.6	6.0	12.9	7.3
Operatives	19.0	20.5	17.4	19.9	14.9	19.2
Laborers	4.6	15.2	4.3	13.6	3.2	9.2
Service workers	9.3	32.1	10.7	32.8	11.1	32.5
Private household	1.9	14.8	2.1	14.7	1.8	13.0
Other	7.4	17.3	8.6	18.1	9.3	19.5
Farmers	8.9	13.5	6.8	11.0	4.5	7.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Statement by Sidney Sonenblum to U. S. Senate Subcommittee on Manpower and Employment, September, 1963, *Hearings,* Part 5, p. 1400.

TABLE 2

EMPLOYED PERSONS, BY OCCUPATION GROUP AND COLOR, 1948, 1955, AND 1962[1] (PER CENT DISTRIBUTION)

Major Occupation Group	White			Nonwhite		
	1962	1955	1948	1962	1955	1948
Total employed						
Number (thousands)	60.7	56.7	53.4	7.1	6.5	5.9
Per cent	100.0	100.0	100.0	100.0	100.0	100.0
White collar workers	47.3	42.1	39.1	16.7	12.0	9.0
Professional and technical workers	12.6	9.8	7.2	5.3	3.5	2.4
Managers, officials, and proprietors, except farm	11.9	11.1	11.6	2.6	2.3	2.3
Clerical	15.8	14.2	13.6	7.2	4.9	3.3
Sales	7.0	6.9	6.7	1.6	1.3	1.1
Blue collar workers	35.4	39.0	40.5	39.5	41.8	39.7
Craftsmen and foremen	13.6	14.1	14.6	6.0	5.2	5.3
Operatives	17.5	20.2	21.0	19.9	20.9	20.1
Laborers, except farm and mine	4.3	4.7	4.9	13.6	15.8	14.3
Service workers	10.6	9.0	7.9	32.8	31.6	30.3
Private household workers	2.1	1.8	1.5	14.7	14.8	15.6
Other service workers	8.5	7.2	6.4	18.1	16.8	14.7
Farm workers	6.8	9.9	12.4	11.0	14.5	21.0
Farmers and farm managers	4.0	6.0	7.8	2.7	5.0	8.5
Laborers and foremen	2.8	3.9	4.6	8.3	9.5	12.5

[1] Data for 1948 and 1955 not adjusted to reflect changes in definition of unemployment adopted in 1957

Note: Because of rounding, sums of individual percentages may not equal 100.

Source: M. A. Kessler, "Economic Status of Nonwhite Workers, 1955-62," *Monthly Labor Review*, July, 1963, p. 2.

TABLE 3

PER CENT DISTRIBUTION OF EMPLOYED MALES, BY COLOR 1940, 1950, AND 1960

Occupational Group	Nonwhite 1960	Nonwhite 1950	Nonwhite 1940	White 1960	White 1950	White 1940
	Per cent Distribution					
Total Employed Men	100.0	100.0	100.0	100.0	100.0	100.0
Professional, Technical and Kindred	3.9	2.2	1.9	11.0	7.9	6.6
Mgrs., Officials, & Proprietors, except Farm	2.3	2.0	1.6	11.5	11.6	10.6
Clerical & Kindred Workers	5.0	3.4	1.2	7.1	6.8	6.5
Sales Workers	1.5	1.5	1.0	7.4	6.6	6.8
Craftsmen, Foremen & Kindred Workers	10.2	7.6	4.4	20.5	19.3	15.9
Operatives & Kindred Workers	23.5	20.8	12.4	19.5	20.0	18.7
Private Household	0.7	0.8	2.3	0.1	0.1	0.1
Service except Private Household	13.7	12.5	12.3	6.0	4.9	5.2
Laborers, except Farm & Mine	19.4	23.1	21.3	5.6	6.6	7.6
Other	8.4	1.3	0.6	4.2	1.2	0.7
Total Nonfarm	88.5	75.2	58.9	92.1	85.1	78.8
Farmers & Farm Mgrs.	4.4	13.5	21.1	5.6	10.5	14.2
Farm Laborers & Foremen	8.1	11.3	20.0	2.3	4.4	7.0
Total Farm	11.5	24.8	41.1	7.9	14.9	21.2

Source: U.S. Bureau of the Census

TABLE 4

PROPORTION OF NONWHITE TO TOTAL MALES IN EACH OCCUPATIONAL GROUP 1940-1959[1] (PERCENTAGES)

Occupational Group	1959	1952	1950	1948	1944	1940
Total Employed Men	9.2	8.9	8.3	8.4	9.8	9.0
Professional, Technical and Kindred	3.0	2.5	2.6	2.6	3.3	3.1
Mgrs., Officials & Proprietors, Except Farm	1.5	1.6	1.9	1.8	2.1	1.5
Clerical and Kindred Workers	6.5	3.4[2]	2.8[2]	2.3[2]	2.8[2]	1.6
Sales Workers	1.8					1.4
Craftsmen, Foremen & Kindred Workers	4.2	4.0	3.9	3.7	3.6	2.7
Operatives and Kindred Workers	10.7	10.4	8.5	10.1	10.1	6.1
Private Household	37.7	31.6	51.3	53.7	75.2	61.8
Service, except Private Household	20.6	21.7	21.4	20.7	21.9	17.4
Laborers, except Farm and Mine	29.5	26.9	21.4	23.6	27.6	21.2
Farmers and Farm Managers	8.2	10.7	10.5	9.8	11.0	13.1
Farm Laborers and Foremen	24.0	16.2	19.8	15.8	21.1	22.5

[1] April of selected years

[2] Includes Sales 1944-1952

Source: U.S. Bureau of the Census

TABLE 5

NONWHITE MALE CRAFT EMPLOYMENT[1] – SOUTH[2] AND NON-SOUTH[3] AND SOUTHERN NONWHITE SHARE OF TOTAL U.S.[4] NONWHITE EMPLOYMENT – 1950 & 1960

Classification	SOUTH				Per cent Nonwhite of South	
	Total		Nonwhite[5]			
	1950	1960	1950	1960	1950	1960
Foremen (n.e.c.)[6]	185,697	277,369	3,544	5,504	1.90	1.98
Mechanics & Repairmen[7]	439,312	617,538	34,660	53,051	7.88	8.59
Metal Craftsmen[8]	157,671	178,465	9,670	8,153	6.13	4.57
Construction Craftsmen[9]	750,027	787,727	76,416	89,552	10.19	11.37
Other Craftsmen[10]	259,629	429,503	18,900	28,352	7.28	6.60
TOTAL	1,752,406	2,290,602	143,190	184,612	8.17	8.06

[1] Figures compiled from Census of the Population: 1950, U.S. Department of Commerce, Bureau of the Census, Vol. II, General Social and Economic Characteristics, By State, Table 77 – "Detailed Characteristics – Role and Class of Worker of Employed Persons, by Occupation and Sex, for the [each one individually] State and for Standard Metropolitan Areas of 100,000 or more"; 1950 Census of Population; U.S. Department of Commerce Bureau of the Census, Vol. III – General Social and Economic Characteristics, By State, Table 58 – "Occupation Group of Employed Persons By Color and Sex, for the State, Urban and Rural: 1960."

[2] South is defined as including Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kan., Louisiana, Maryland, Miss., North Carolina, Oklahoma, So. Carolina, Tenn., Texas, Virginia, and West Va.

[3] Non-South is defined as including all other states except Alaska and Hawaii.

[4] U.S. is defined as including all states except Alaska and Hawaii.

[5] Nonwhite includes Negro, Indian, and Oriental.

[6] Same as 1940 census – foremen "not elsewhere classified" (n.e.c.)

[7] Same as 1940 census.

[8] Includes blacksmiths, forgemen, hammermen, boilermakers, machinists and job setters, millwrights, molders, tinsmiths, coppersmiths, sheet metal workers, toolmakers, die makers, and setters. 1960 figures also include heat treaters, metal rollers and roller hands, which were classified in the 1950 "other" category.

[9] Includes masons, tile setters, carpenters, electricians, painters, paperhangers, plasterers and cement finishers, plumbers and pipefitters, and structural metal workers. Cranemen, hoistmen, and construction machine operators have been substituted in the 1950 figures for the 1960 classification of excavating, grading, and road machine operators. Glaziers and stone cutters, included under "construction" in 1950, are found in the category of "other craftsmen" in 1960.

TABLE 5 – continued

NONWHITE MALE CRAFT EMPLOYMENT[1] – SOUTH[2] AND NON-SOUTH[3] AND SOUTHERN NONWHITE SHARE OF TOTAL U.S.[4] NONWHITE EMPLOYMENT – 1950 & 1960

NON-SOUTH				Per cent Nonwhite of Non-South		TOTAL U.S. Nonwhite		Per cent Southern of Total U.S. Nonwhite	
Total		Nonwhite							
1950	1960	1950	1960	1950	1960	1950	1960	1950	1960
548,481	815,177	5,768	12,365	1.05	1.52	9,312	17,869	38.1	30.8
1,180,857	1,568,041	38,194	71,513	3.23	4.56	72,854	124,564	47.6	42.6
798,258	919,087	17,295	28,980	2.17	3.15	26,965	37,133	35.9	22.0
1,553,677	1,600,813	37,331	47,782	2.40	2.98	113,747	137,334	67.2	65.2
836,622	1,254,405	17,030	34,732	2.04	2.77	35,930	63,084	52.6	44.9
4,917,895	6,157,523	115,618	195,372	2.35	3.17	258,808	379,984	55.3	48.6

[10] Includes bakers, compositors and typesetters, locomotive engineers and firemen, pressmen, bookbinders, cabinet makers, engravers, furriers, goldsmiths, inspectors, jewelers, lens grinders and polishers, log and lumber scalers and graders, millers, motion picture projectionists, opticians, piano and organ tuners and repairmen, shoemakers (except in factories), silversmiths, tailors, telegraph and telephone linemen and servicemen, upholsterers, watchmakers, and window dressers. The 1950 figures also include heat treaters, annealers and temperers, metal rollers and roll hands, roofers and slaters, craftsmen and kindred workers (not elsewhere classified), and members of the armed forces whereas the 1960 figures contain cranemen, derrickmen, electrotypes, glaziers, lithographers, loom fixers, plate printers, stereotypes, stone carvers, and stone cutters.

TABLE 6

PERCENTAGE CHANGE IN CRAFT EMPLOYMENT BY CATEGORY AND RACE SOUTH,[2] NON-SOUTH,[3] AND UNITED STATES[4] 1950-1960[1]

	SOUTH						
	White			Nonwhite[5]			
Classification	1950	1960	1960/ 1950	1950	1960	1960/ 1950	1950
Foremen (n.e.c.)[6]	182,153	271,865	149	3,544	5,504	155	542,713
Mechanics & Repairmen[7]	404,659	564,487	139	34,660	53,051	153	1,142,663
Metal Craftsmen[8]	148,001	170,312	115	9,670	8,153	84	789,963
Construction Craftsmen[9]	673,611	698,175	104	76,416	89,552	117	1,516,346
Other Craftsmen[10]	240,792	401,151	167	18,900	28,352	150	819,502
TOTAL	1,649,216	2,105,990	128	143,190	184,612	129	4,802,277

[1] (Same as #1, Table 5)
[2] (Same as #2, Table 5)
[3] (Same as #3, Table 5)
[4] Includes figures for all states except Alaska and Hawaii
[5] (Same as #5, Table 5)
[6] (Same as #6, Table 5)
[7] (Same as #7, Table 5)
[8] (Same as #8, Table 5)
[9] (Same as #9, Table 5)
[10] (Same as #10, Table 5)

TABLE 6 – continued

PERCENTAGE CHANGE IN CRAFT EMPLOYMENT BY CATEGORY AND RACE SOUTH,[2] NON-SOUTH,[3] AND UNITED STATES[4] 1950-1960[1]

NON-SOUTH					UNITED STATES					
White		Nonwhite			White			Nonwhite		
1960	1960/ 1950	1950	1960	1960/ 1950	1950	1960	1960/ 1950	1950	1960	1960/ 1950
802,812	148	5,768	12,365	214	724,866	1,074,677	148	9,312	17,869	192
1,496,528	131	38,194	71,513	187	1,547,322	2,061,015	133	72,854	124,564	171
890,107	114	17,295	28,980	168	928,964	1,060,419	114	26,965	37,133	138
1,553,031	102	37,331	47,782	128	2,189,957	2,251,206	103	113,747	137,334	121
1,219,673	149	17,030	34,732	204	1,060,384	1,620,824	153	35,930	63,084	176
5,962,151	124	115,618	195,372	169	6,451,493	8,068,141	125	258,808	379,984	147

TABLE 7

PROJECTED CHANGES IN CIVILIAN LABOR FORCE BY COLOR AND AGE GROUP, 1962-1972

Age Group	1962				1972			
	Whites		Nonwhites		Whites		Nonwhites	
	Millions	Per cent	Per cent	Millions	Per cent	Millions	Per cent	Millions
	64.0	89.2	10.8	7.9	88.7	76.5	11.3	9.7
14 - 19	5.6	7.8	1.0	.7	8.7	7.5	1.0	1.0
20 - 24	6.2	8.6	1.3	.9	11.1	9.6	1.4	1.2
25 - 54	40.6	56.5	7.1	5.1	52.3	45.1	7.0	6.1
55 and over	11.7	16.3	1.5	1.1	16.6	14.3	1.6	1.4

TABLE 8

PROJECTED CHANGES IN LABOR FORCE BY COLOR AND SEX, 1962-1972

	1962		1972		1962-1972 Change (Millions)
	Millions	Per cent of Labor Force	Per cent of Labor Force	Millions	
Labor Force	71.9	100.0	100.0	86.2	14.3
Whites	64.0	89.0	88.7	76.5	12.5
Nonwhites	7.9	11.0	11.3	9.7	1.8
Females	24.5	34.1	35.3	30.5	6.0
White	21.3	29.6	30.7	26.5	4.2
Nonwhite	3.2	4.5	4.6	4.6	.8
Males	47.4	65.9	64.6	55.7	8.3
White	42.7	59.4	58.0	50.0	7.3
Nonwhite	4.7	6.5	6.6	5.7	1.0

Source: Statement of Sidney Sonenblum to U.S. Senate Subcommittee on Manpower and Employment, *Hearings*, September, 1963, Part 5, p. 1393.

TABLE 9

UNEMPLOYMENT RATES OF EXPERIENCED WORKERS[1] BY COLOR AND MAJOR OCCUPATION GROUP

1955 and 1962

Major occupation group	White		Nonwhite		Nonwhite as percent of white	
	1962	1955	1962	1955	1962	1955
All occupation groups[2]	4.9	3.5	11.0	7.7	224	208
Clerical and sales workers	3.8	3.2	7.7	7.0	203	219
Craftsmen and foremen	4.8	3.9	9.7	8.8	202	226
Operatives	6.9	5.5	12.0	8.4	174	153
Private Household workers	3.1	3.0	7.1	5.6	229	187
Other service workers	5.3	5.2	10.8	8.8	204	169
Farm laborers and foremen	3.9	3.0	5.8	6.3	149	210
Laborers, except farm and mine	11.0	9.8	15.8	12.1	144	123

[1] The base for the unemployment rate includes the employed, classified according to their current jobs, and the unemployed, classified according to their latest civilian job, if any; excludes the unemployed persons who never held a full-time civilian job.

[2] Includes the following groups not shown separately: Professional and technical workers; managers, officials, and proprietors; and farmers and farm managers.

Source: "Economic Status of Nonwhite Workers, 1955-62," From the *Monthly Labor Review*, July, 1963, United States Department of Labor, Bureau of Labor Statistics.

TABLE 10

UNEMPLOYMENT RATES BY COLOR, AGE, AND SEX, 1962

	Unemployment Rates			
	Males		Females	
Age Group	White	Nonwhite	White	Nonwhite
	Per cent	Per cent	Per cent	Per cent
14 and over	4.6	11.9	5.5	11.1
14 - 19 years	12.3	20.7	11.5	28.2
20 - 24 years	8.0	14.6	7.7	18.2
25 - 34 years	3.8	10.5	5.4	11.5
35 - 44 years	3.1	8.6	4.5	8.9
45 - 54 years	3.5	8.3	3.7	7.1
55 years and over	4.1	10.1	3.5	3.6

Source: M. A. Kessler, "Economic Status of Nonwhite Workers, 1955-1962," *Monthly Labor Review,* July, 1963, p. 3.

TABLE 11

MDTA TRAINEES AND TOTAL NONWHITE EMPLOYMENT BY OCCUPATION

	Per cent MDTA Trainees*		Per cent Nonwhite Employment (1962)
Occupational Group	Total	Nonwhite	
	100.0	100.0	100.00
Professional, management	8.6	7.9	7.9
Clerical, sales	23.0	19.0	8.8
Skilled	30.8	26.9	6.0
Semiskilled	25.4	29.6	19.9
Service	10.2	14.2	32.8
Other	2.0	2.3	24.6

*June, 1963

Source: Statement by Seymour Wolfbein, Deputy Manpower Administrator, U. S. Dept. of Labor before Senate Subcommittee on Manpower and Employment, June 6, 1963.

FOOTNOTES

1. U. S. Congress, 88th, 2d Session, Joint Economic Committee, Congress of the United States, *1964 Joint Economic Report,* Senate Report No. 931, p. 61.
2. Defined as the "... amounts which the nation pays out to help support the dependent Negro who, were he not denied equal opportunity, would be self-supporting. They are the amounts which the nation pays out for a higher-than-necessary crime rate, for the support and rehabilitation of blighted housing areas, for needless property damage created by racial violence, and for a host of equally expensive situations which would not exist except for race discrimination." National Urban League, *Industry's Most Underdeveloped Resource,* New York, n.d., n.p.
3. *New York Times,* July 27, 1964.
4. While median nonwhite incomes have increased steadily from $1,614 in 1947 to $3,330 in 1962, with the exception of 1960-1961 when there was a slight decline, the nonwhite median was only 53 per cent of whites in 1962 as compared with 57 per cent in 1952.
5. See Clark Kerr, John T. Dunlop, Charles Myers, and Frederick Harbison, *Industrialism and Industrial Man* (Cambridge: Harvard University Press, 1960), p. 35.
6. See William H. Nicholls, *Southern Tradition and Economic Progress* (Chapel Hill: University of North Carolina Press, 1961).
7. Mathew A. Kessler, "Economic Status of Nonwhite Workers, 1955-62," *Monthly Labor Review,* July, 1963, pp. 2-3.
8. Dale E. Hiestand, *Economic Growth and Employment Opportunities of Minorities,* New York Columbia University Press, 1964, pp. 110-111.
9. Statement of Samuel Ganz, Assistant Director for Manpower and Automation Research, Office of Manpower, Automation and Training, U. S. Department of Labor to the U. S. Senate Subcommittee on Employment and Manpower of the Committee on Labor and Public Welfare, September 10, 1963.
10. *Ibid.*
11. The estimates of the proportions to be supplied to various crafts by 1970 at the present rate of apprenticeship training range from a low of 3 per cent for electricians. 1961 United States Commission on Civil Rights Report, *Employment,* Table 16, p. 232. See also Louis Ruthenburg, "The Crisis in Apprenticeship Training," *Personnel,* July/August, 1959; U. S. Department of Labor, *Our Manpower Implications* (Washington, D. C.: U. S. Govt. Printing Office, 1957); National Manpower Council, *A Policy for Skilled Manpower* (New York: Columbia University Press, 1954), p. 228; Eli Ginzberg, *The Negro Potential* (New York: Columbia University Press, 1956).
12. J. J. Morrow, "American Negroes, A Wasted Resource," *Harvard Business Review,* January-February, 1957, p. 69.
13. See, for example, Connecticut Commission on Civil Rights, *Training*

of Negroes in the Skilled Trades, Hartford, Conn., 1954, p. 56; Irving Babow and Edward Howden, *A Civil Rights Inventory of San Francisco,* Part I — "Employment," Council for Civic Unity, San Francisco, California, 1958 p. 109; Lanston T. Hawley, "Negro Employment in the Birmingham Metropolitan Area," Case Study No. 3 in *Selected Studies in Negro Employment in the South,* National Planning Association, Committee of the South, Report No. 6, 1955; E. William Noland and E. Wight Bakke, *Workers Wanted: A Study of Employer Hiring, Policies, Preferences and Practices* (New York: Harper Brothers, 1949), pp. 32, 59; Bernard Rosenberg and Penny Chapin, "Management and Minority Groups: A Study of Attitude and Practices in Hiring and Upgrading," in *Discrimination and Low Incomes,* New York State Commission Against Discrimination, 1949.

14. See my *The Negro and Organized Labor* (New York: Wiley, 1965).
15. Leon E. Lunden, "Antidiscrimination Provisions in Major Contracts, 1961," *Monthly Labor Review,* June, 1962, p. 643.
16. See Paul Norgren and Samuel Hill, *Toward Fair Employment* (New York: Columbia University Press, 1964) and Ray Marshall, *The Negro and Organized Labor* (New York: Wiley, 1965).
17. Employment of salaried workers increased by 13.8 per cent but nonwhite employment in these categories increased by 23.5 per cent. Of these nonwhite salaried employees, 3,266 were placed in management, professional, sales, and technical jobs and 2,884 as clerical and office employees. The increase in nonwhite hourly employment was distributed as follows:

Craftsmen	1,964
Operatives	17,557
Service	971
Laborers	538

(Report to the President, The President's Committee on Equal Employment Opportunity, November, 1963, p. 116.)

18. PCEEO, Committee Reporter, November, 1963.
19. For example, in spite of all of the demonstrations in New York during the summer of 1963, by December, 1963, only 111 Negroes and Puerto Ricans gained entry into unions as journeymen or apprentices. (*New York Times,* December, 1963.) And in spite of much agitation after 1953 to eliminate job segregation in the Southern petroleum refining industry, a study of 11 companies revealed that by 1960 only about 550 Negroes had been promoted. Of these, 364 promotions were in two companies and 24 were temporary appointments. (See Ray Marshall, "Some Factors Influencing the Upgrading of Negroes in the Southern Petroleum Refining Industry," *Social Forces,* December, 1963.)
20. U. S. Senate, Subcommittee on Manpower and Employment, *Hearings on the Nation's Manpower Revolution,* Part 9, 1963, pp. 3134-3145.
21. Paul Norgren and Samuel Hill, *Toward Fair Employment,* Chs. II and III.
22. Steele v. L. & N. R. R., 323 U. S. 192; Archibald Cox, "The Duty

of Fair Representation," *Villanova Law Review,* January 1957; Benjamin Aaron, "Some Aspects of the Union's Duty of Fair Representation," *Ohio State Law Journal,* Winter, 1961, p. 39; Wallace Corp. v. NLRB, 323 U. S. 248.

23. Central of Georgia Ry. v. Jons, 229 F. 2d 648, Cert. denied 352 U. S. 848; Richardson v. Texas & New Orleans Ry. Co., 242 F. 2d 239; 77 S. Ct. 230.
24. See Hunter v. Atcheson Topeka and Santa Fe Ry. II Race Relations Law Reporter 996.
25. Bethlehem Alameda Shipyard Cases, R-5963-94 (1943).
26. Carter Manufacturing Company, 59 NLRB 803.
27. NLRB, *Tenth Annual Report,* 1945, p. 18.
28. 147 NLRB no. 166.
29. Milton Friedman, *Capitalism and Freedom* (Chicago: University of Chicago Press, 1962), p. 108.
30. *Ibid.,* p. 109.
31. Statement by Sar Levitan, "Training Under the Area Redevelopment Act," to the U. S. Senate Employment and Manpower Subcommittee, June 7, 1963.
32. George P. Schultz, "The Fort Worth Project of the Armour Automation Committee," *Monthly Labor Review,* January, 1964, p. 56.
33. Indeed, in June, 1963, it was reported that only 2.7 per cent of the MDTA's trainees but 20.1 per cent of the unemployed in 1962 had less than eight years of education, and 60.9 per cent of MDTA trainees and only 37.1 per cent of the unemployed were high school graduates. Moreover, only 10 per cent of MDTA trainees but 30 per cent of the unemployed were over 45 years of age.
34. *New York Times,* July 13, 1963, p. 7.
35. Local 1367, ILA, Case No. 23-CB-467, 148 NLRB No. 44, September 14, 1964.

2

THE ANATOMY OF THE NEGRO-WHITE INCOME DIFFERENTIAL*

Lowell E. Gallaway**

Two developments of the past few years have created increased interest in the income levels of Negro members of the American community: (1) the renewed drive against discriminatory practices in the United States and (2) the sudden revival of interest in the question of the extent of poverty in the American economy. The first of these suggests an explanation for the observed low levels of Negro income while the latter is concerned with the effects of such levels of income. There can be no disputing the existence of marked income differentials between whites and Negroes in the United States: the 1960 decennial census shows that median family income for nonwhites (mostly Negroes) was $3,161 while that for whites was $5,893. Thus, nonwhite median family income is 53.6 per cent of white median family income. The divergence between white and nonwhite income, in turn, is the ultimate basis for the various statements pointing out that one-fifth to one-fourth of America's families with poverty levels of income are nonwhite despite their making up only about one-tenth of the total population.[1]

The data detailing the absolute levels of white and nonwhite income are primarily cross-sectional in character; i. e., they describe the distribution of income at a particular point in time. However, little evidence of the dynamics of the income distribution process as it relates to the movements of whites and nonwhites between income classes through time is available. In this paper data from the records maintained by the Social Security Administration in the course of its administering the old-age, survivors, and disability insurance (OASDI) program will be used to shed some light on this aspect of the white-nonwhite income differential. The character of these data will be described in more detail in a later section of the paper.

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*The major part of this research was conducted while the author was a member of the staff of the Social Security Administration. It was in this capacity that the special tabulations of Social Security Administration data were made available to him.

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INCOME DISTRIBUTION AS A DYNAMIC PROCESS

Some inferences about the dynamics of the income-distribution process as it affects different racial groups can be drawn from the existing cross-sectional data. In order to develop these, let us initially describe the way in which income is distributed in terms of a simple probability process.[2] For example, assume that there are two income classes in the economy: "high" and "low." Also, assume that the probabilities that individuals will move beween these classes is given by the matrix:

$$P = \begin{Vmatrix} p_{ll} & p_{lh} \\ p_{hl} & p_{hh} \end{Vmatrix} \qquad (1)$$

in which the subscripts l and h refer to low and high, respectively. Now, if it is assumed that these probabilities are applicable to any and all individuals in the particular income class, the operation of these probabilities will describe the distribution of individuals among the two income classes at any moment in time. As a case in point, the pattern of transition among income classes between an initial point in time (t_0) and a point two periods later (t_2) is given by P^2 (the square of the matrix P), which may be thought of as a two-period transition matrix. Similarly, a transition matrix may be generated for any number of time periods so that the movement of individuals between income classes over the interval t_0 to t_n is always describable by such a matrix (equal to P^n). Now, as n grows larger, P^n approaches an equilibrium state in which all the elements in a particular column of the matrix are equal to one another. Once the equilibrium position is achieved, the distribution of income into the various income classes remains unchanged so long as the initial probability matrix (P) remains unchanged.

Quite obviously, this approach to conceptualizing the process of income distribution places its major emphasis on the nature of the transition probabilities between income classes (i. e., on the matrix P). In the simple illustrative case, the larger the term p_{11}, *ceteris paribus,* the greater will be the proportion of individuals who in equilibrium are in the low income group. Similarly, the larger the value p_{hh}, *ceteris paribus,* the greater will be the proportion who in equilibrium find themselves in the high income class.

In our simple case the relative numbers of individuals in each income class at time t_0 do not affect the final distribution between high and low income classes. This enables us to reach an initial conclusion with respect to the character of the income transition probabilities of whites and Negroes; for even though discrimination against Negroes upon their initial entry into the labor market forced a disproportionate number of them into low income classes, the possession of similar income transition probabilities by this group would tend to eliminate the impact of the discrimination. Therefore, the observable difference in the levels of income of whites and Negroes (particularly across all age classes)[3] is indicative of differences in the income transition probabilities of these groups. This points up the fact that the relative income position of Negroes is more than the product of an initial disadvantage in job opportunities; in addition, it is the result of a relative inability on the part of Negroes to advance from income class to income class. This difference in their income transition probabilities may be the result of several factors:

1. A lack of job qualifications which would permit upward movement through the various income classes. In particular, this is likely to be the result of differences in levels of educational attainment of whites and Negroes.
2. Differences in the relative proximity of Negroes to jobs with higher levels of remuneration; e. g., the geographical concentration of the Negro in the relatively low-wage South.
3. A consistent pattern of white exercise against Negroes of what Becker calls a "taste for discrimination."[4]
4. Differences in the extent to which whites and Negroes are able to acquire on-the-job training and experience.
5. Differences in the impact on whites and Negroes of the normal processes of economic change in the American economy.

The relative strength of each of these factors is difficult to assess but through the use of the aforementioned Social Security Administration data a tentative exploration of the phenomenon of differential income transition probabilities will be attempted.

NATURE OF THE DATA

It is possible to obtain information from the Social Security Administration records describing the patterns of movement between income classes over time for a sample of those who earn income in employment covered by the old-age, survivors, and disability insurance system. These data are derived from the 0.1 per cent Continuous Work History Sample maintained by the Social Security Administration. While these data are useful for this purpose, they do possess certain shortcomings. For one thing, the types of income for which records are available are wage and self-employment income and, consequently, provide no information regarding income from nonemployment sources (i.e., property income). Secondly, the data provide only fragmentary information regarding movement between income classes because data are not available describing levels of employment income in excess of the taxable limit for social security purposes. As a result no information on the behavior of individuals in the higher income groups is available.

While these shortcomings in the data should not be completely ignored, neither should the useful features of the data be disregarded. After all, there is available from this source information relating to the employment income patterns of a reasonably representative sample of the working population of the United States. Specifically, data describing these patterns for the years 1955-58 by sex, race, and age will be employed in this paper. These should prove quite useful from the standpoint of increasing our understanding of the nature of the differences in income opportunities for whites and Negroes.

AGGREGATE WHITE-NEGRO INCOME TRANSITION PROBABILITIES

The data referred to group individuals into four different income classes for the years 1955-58: \$1-1049, \$1,050-2,099, \$2,100-3,149, and \$3,150 and over. We will designate these income classes by the numbers 1, 2, 3, and 4, respectively. The individuals included in the sample are restricted to male wage earners in 1959 who had earnings credits under the OASDI system in all the years 1955-58. From these data aggregate income transition matrices for the period 1955 through 1958 were calculated for white and Negro members of the sample (Table I).[5] These show a definite pattern: in the three lowest income classes there is a pronounced tendency for Negroes to have less of an opportunity to advance to a higher income class while in the highest income class it is more difficult for Negroes to remain in this class than it is for whites.

TABLE I

INCOME TRANSITION MATRICES 1955-58, 1959
MALE WAGE WORKERS, BY RACE

Income Class	White Matrix[1]				Negro Matrix[2]			
	Income Class				Income Class			
	1	2	3	4	1	2	3	4
1..............	.310	.280	.169	.241	.470	.298	.159	.073
2..............	.157	.269	.237	.337	.224	.393	.278	.105
3..............	.065	.128	.284	.523	.103	.136	.390	.371
4..............	.017	.031	.044	.908	.064	.066	.097	.773

[1] Sample of 27,851.
[2] Sample of 2,707.
Source: Social Security Administration, 0.1 per cent Continuous Work History Sample.

On two counts these data are not surprising. After all, they are in agreement with the inference concerning racial income transition probabilities that was drawn from the cross-sectional estimates of income levels by race. But, beyond that, they can be anticipated from one aspect of the work which has been done in connection with the permanent income hypothesis.[6] According to the permanent income thesis, the further one's income lies from its normal level, the greater the likelihood of its returning to that level in some future period. For example, an individual with a normal income of $3,000 a year whose income this year is $1,000 has a greater probability of having an income of $3,000 next year than he would if this year's income were $2,000. The significance of this for the data of Table I is clear. Since the same dollar income intervals are used in defining the income classes for both whites and Negroes, whites in income class 1 are likely to be further removed from their normal income level than Negroes in income class 1 (remember the difference between white and Negro median incomes). Consequently, whites in income class 1 would be expected to have a greater probability of advancing out of that class than Negroes.

No matter what the source of the differences shown in Table I, the conclusion the data suggests is that Negroes have less opportunity to improve their levels of income than whites. A quantitative measure of the impact of the differences in the transition rates of Table I upon the income opportunities of Negroes can be constructed by means of the following simple statistic:

$$\sum_{\substack{i \\ i<j}} \sum_{j} P_{ij} - \sum_{\substack{i \\ i>j}} \sum_{j} P_{ij} \tag{2}$$

Very simply, this statistic provides a measure of the net gain in terms of improvement in income position for the group possessing the income transition matrix in question. For the white matrix this statistic has a value of + 1.345 while for the Negro it is + .594. Thus, the net opportunities (in a probability sense) for improvement in income status over this period are more than twice as great for whites than for Negroes. A more sophisticated measure of income opportunity can be obtained by weighting each of the P_{ij}'s by the number of income classes moved. This produces a statistic which, in addition to measuring the opportunity for advancement, takes into account differing magnitudes of advancement. In this form the income opportunity statistic is

$$\sum_{\substack{i \\ i\neq j}} \sum_{j} (j - i) P_{ij} \tag{3}$$

The calculated values for the statistic are + 2.203 for the white matrix and + .707 for the Negro indicating that Negroes have a substantially smaller opportunity of achieving an income advancement of a given amount than do whites.

REGIONAL TRANSITION MATRICES

The opportunity statistics calculated from the transition matrices of Table I are suggestive of various kinds of discrimination against Negroes (such as discrimination in job opportunities, education, etc.). However, it is conceivable that they reflect nothing more than regional differences in income opportunity combined with a differing geographic distribution of whites and Negroes. To be more specific, larger percentages of Negroes than whites are found in low-income regions of the United States. Thus, the income opportunities prevalent in these low-income regions receive greater weight in the Negro transition matrix than in the white and may account for a substantial part of the observed difference in income opportunity between the two racial groups.

This difficulty could be overcome if it were possible to classify the individuals in the sample by region. Unfortunately, such information is not available. However, we can attack the problem indirectly. Consider our initial 2x2 income transition matrix (with the numbers 1 and 2 substituted for the subscripts 1 and h):

$$P = \left\| \begin{array}{cc} P_{11} & P_{12} \\ P_{21} & P_{22} \end{array} \right\| \tag{1a}$$

Now, any element of P can be defined as a weighted average of the following type:

$$P_{ij} = \sum_{k=1} \alpha_{ik} (P_{ij})_k \tag{4}$$

where α_{ik} represents the appropriate weights to be attached to the P_{ij} of various regions and k is a subscript denoting region.[7]

In addition, by definition:

$$\sum_{j=1} (P_{ij})_k = 1 \tag{5}$$

Together, expressions (4) and (5) define six constraints on the P_{ij} of k regions.[8] This is not sufficient to permit solving for the P_{ij} of even two regions (which would total eight). One additional constraint can be obtained from the relationship:[9]

$$\rho_j = \sum_{i=1} \sum_{k=1} \lambda_{ik} \; (P_{ij})_k \tag{6}$$

where ρ_j represents the percentage of individuals in the jth income class and λ_{ik} denotes the approriate weights to be attached to the various P_{ij} ($\sum_{i=1} \sum_{k=1} \lambda_{ik} = 1$). [10]

The addition of a seventh constraint makes it possible to solve the following set of simultaneous equations for a 2x2 income transition matrix:

$$\begin{array}{llllll}
\alpha_{1m}(P_{11})_m & +\alpha_{1n}(P_{11})_n & \cdots\cdots & \cdots\cdots & \cdots\cdots & =\bar{P}_{11} \\
\cdots\cdots & +\alpha_{1m}(P_{12})_m & +\alpha_{1n}(P_{12})_n & \cdots\cdots & \cdots\cdots & =\bar{P}_{12} \\
\cdots\cdots & \cdots\cdots & +\alpha_{2m}(P_{21})_m & +\alpha_{2n}(P_{21})_n & \cdots\cdots & =\bar{P}_{21} \\
\cdots\cdots & \cdots\cdots & \cdots\cdots & \cdots\cdots & +\alpha_{2n}(P_{22})_n & =\bar{P}_{22}-\alpha_{2m}(P_{22})_m \\
(P_{11})_m & +(P_{12})_m & \cdots\cdots & \cdots\cdots & \cdots\cdots & =1 \\
\cdots\cdots & \cdots\cdots & +(P_{21})_m & \cdots\cdots & \cdots\cdots & =1-(P_{22})_m \\
\lambda_{1m}(P_{11})_m & +\lambda_{1m}(P_{11})_n & +\lambda_{2m}(P_{21})_m & +\lambda_{2n}(P_{21})_n & \cdots\cdots & =\rho_1
\end{array}$$

where the $\bar{P}_{ij}$ denote the transition probabilities of the aggregate transition matrix and the subscripts m and n denote two different regions.

Note that the absence of an eighth constraint makes it necessary to express the solutions for the various P_{ij} in terms of one of the P_{ij}'s. In this case the P_{ij} treated as a parameter is $(P_{22})_m$. Estimates of the other parameters were obtained from the 1960 population census and the sample data used in calculating the matrices of Table I (see Appendix for a detailed explanation of sources of the estimates of the parameters). The regions used were the South (consisting of the South Atlantic, East South Central, and West South Central states) and the non-South (the remainder of the continental United States). For the Negro income transition matrix, the results of solving the set of simultaneous equations are as follows:

Negro Matrices

Non-South (m)

Income Class	Income Class	
	1	2
1	$-.609 + 1.522\,(P_{22})_m$	$1.609 - 1.522\,(P_{22})_m$
2	$1 - (P_{22})_m$	$(P_{22})_m$

South (n)

Income Class	Income Class	
	1	2
1	$1.267 - .672\,(P_{22})_m$	$-.267 + .672\,(P_{22})_m$
2	$-1.067 + 1.505\,(P_{22})_m$	$2.067 - 1.505\,(P_{22})_m$

Disaggregating the white matrix in this fashion produces:

White Matrices

Non-South (m)

Income Class	Income Class	
	1	2
1	$.202 + .474\,(P'_{22})_m$	$.798 - .474\,(P'_{22})_m$
2	$1 - (P'_{22})_m$	$(P'_{22})_m$

South (n)

Income Class	Income Class 1	2
1	$1.107 - .880\,(P'_{22})_m$	$-.107 + .880\,(P'_{22})_m$
2	$-2.250 + 2.505\,(P'_{22})_m$	$3.250 - 2.505\,(P'_{22})_m$

An examination of the computed regional income transition matrices reveals that there are definite limits on the range of the values $(P_{22})_m$ and $(P'_{22})_m$ (the prime symbol is here used to distinguish the white from the Negro matrix). For example, the calculated value of $(P_{21})_n$ (which must be $\geqslant 0$) implies that $(P_{22})_m \geqslant .709$. Similarly, the calculated value of $(P'_{21})_n$ implies that $(P'_{22})_m \geqslant .898$. Of course, the maximum values for $(P_{22})_m$ and $(P'_{22})_m$ are equal to unity. From this knowledge it is possible to compute income opportunity statistics of the type shown in expression (2) for the extreme values of $(P_{22})_m$ and $(P'_{22})_m$. With a 2 x 2 transition matrix the opportunity statistic is simply

$$P_{12} - P_{21} \tag{7}$$

which is a linear relationship for all the estimated regional transition matrices. Consequently, by estimating (7) for the extreme values of $(P_{22})_m$ and $(P'_{22})_m$ we define the entire set of regional opportunity statistics. These are shown graphically in Figure I.

The graphic display of Figure I yields startlingly clear conclusions with respect to the possibility that the observed difference in the income opportunity statistics calculated from the aggregated matrices might be the result of the different geographical distribution of the two racial groups. With any possible combination of values of $(P_{22})_m$ and $P'_{22})_m$, the opportunity statistic for southern whites is greatly in excess of that for southern Negroes. Similar, although less pronounced, results are obtained from examining the data pertaining to the non-southern states. The conclusion suggested by these data is that the differing geographical distribution of Negroes and whites does not account for the observed differences in the income opportunity statistics. Consequently, one is led to accept the observed differences in the income opportunity statistics as being indicative of discriminatory practices rather than reflecting any accident of geography.

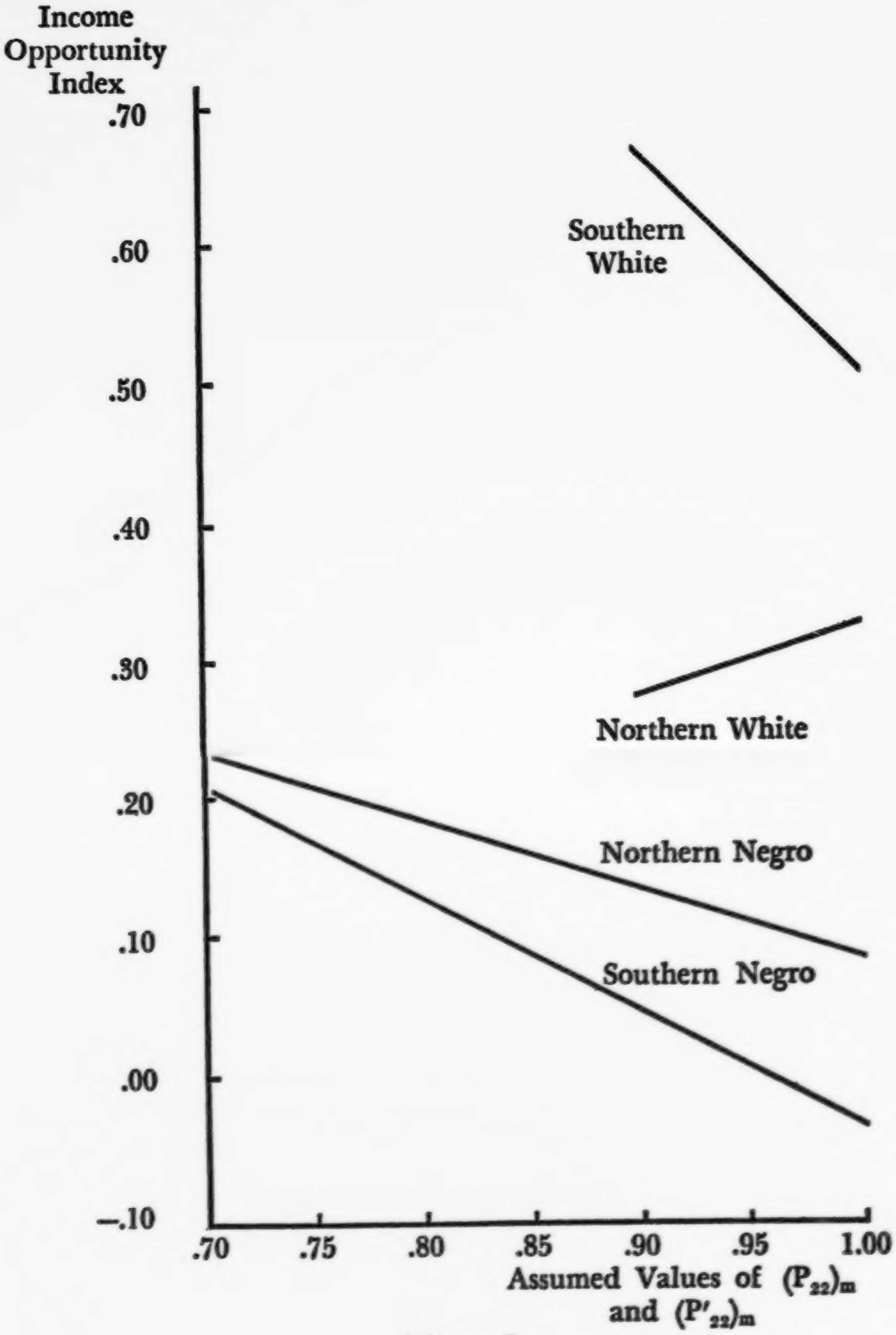

Figure I

Income Opportunity Indices, Various Assumed Values of $(P'_{22})_m$ and $(P'_{22})_m$, by Region, United States, 1955-1958

INCOME OPPORTUNITY BY AGE GROUP

While the aggregative estimates of Negro-white income opportunity are informative, even more interesting results can be obtained by subdividing the samples by age. The data are available by five-year intervals from age 20 through age 59 and for the group aged 60 and over. For determining age the reference year is 1959.[11] From these data income opportunity statistics of the weighted type were calculated for each age group by race. These are shown in Table II and illustrated graphically in Figure II. The results of these calculations paint a rather clear picture of the process by which the relative impoverishment of the Negro takes place. His pattern of income opportunity shows that his maximum opportunities for

TABLE II

INCOME OPPORTUNITY, 1955-58, 1959 MALE WAGE WORKERS, BY AVERAGE AGE 1955-58, AND RACE

Average Age, 1955-58	White	Negro	Difference Between White and Negro
19.5	1.666	.484	+1.182
24.5	2.870	1.174	+1.696
29.5	3.063	.884	+2.179
34.5	2.377	.619	+1.758
39.5	2.337	.494	+1.843
44.5	2.045	.652	+1.393
49.5	1.786	.617	+1.169
54.5	2.071	.243	+1.828
59.5 and over[1].....	.830	.340	+ .490

[1] Age group 60 and over in 1959.

Source: Social Security Administration, 0.1 per cent Continuous Work History Sample.

increasing his level of income occur in the age group with an average age of 24.5 over the period 1955-58. Beyond this point, the income opportunity statistic for the Negro male generally declines. Yet, at this point of maximum opportunity for income advancement, the American Negro male's opportunities are less than 40 per cent (as measured by the opportunity statistic) as good as his white counterpart's. And the worst is yet to come! While the Negro male reaches the peak of his opportunity for income advancement at an average age of about 25, the white male's income opportunities are his greatest at an average age of about 30. This in part undoubtedly reflects the longer periods of schooling of white males and a later entry into the labor force but, whatever the cause, the effect is to further widen the gap between the income opportunity statistic for white males and that for Negro males: at an average age of about 30, the Negro's income opportunities are less than one-third as promising as a white's. Beyond this age, the relative position of the Negro improves but only because of a more rapid decline in the income opportunities of white males. All that this improvement accomplishes is some moderation of the decline in the relative income position of the Negro. Data from the decennial census of 1960 show that the nonwhite male's median income amounted to 64 per cent of white male median income in the age class 20-24. This is reduced to 58 per cent in the age interval 25-34, a decline of about 10 per cent in the relative income position of the nonwhite. Over the next 20 years there is a further decline to 53 per cent which is a loss of less than 10 per cent in the relative income position of the nonwhite. Thus, the decline in relative income position is greater between average ages of about 22 through 30 than it is between average ages of about 30 through 50.[12]

The truly discouraging aspect of the data shown here is the implication that, as a group, the American Negro's ultimate economic status is essentially determined at about an average age of 25, an age at which the Negro is at the greatest relative disadvantage in terms of possessing opportunities for income advancement. It is during these critical years before the age of 30 that so many Negroes are committed to an economic status that ensures that they will, in the future, appear among the low-income groups in numbers that are disproportionate to their relative numerical importance in the population.

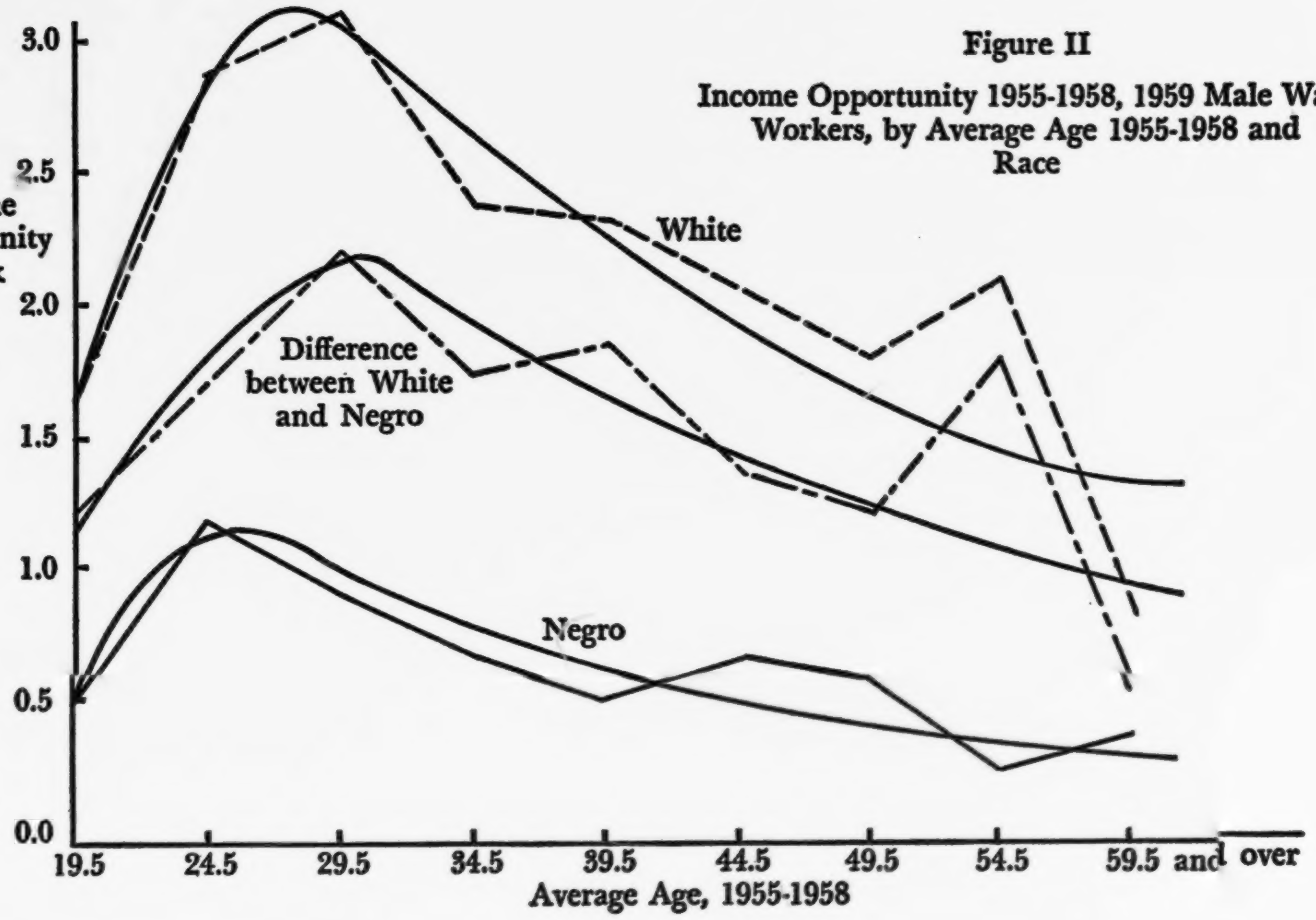

Figure II

Income Opportunity 1955-1958, 1959 Male Wage Workers, by Average Age 1955-1958 and Race

THE IMPACT OF WORK EXPERIENCE AND ECONOMIC CHANGE ON INCOME OPPORTUNITY

In order to complete our picture of the nature of the income opportunities available to whites and Negroes in the United States, some discussion of the impact of work experience and economic change upon such opportunity is needed. The data describing income opportunity for the group with an average age of about 20 suggest that at a very early stage in the working life of a Negro male he is at a marked disadvantage in terms of income opportunity. This initial disadvantage is probably the result of two factors: differences in levels of education and the "taste for discrimination" in American society. But, as we have noted, the Negro's disadvantage becomes greater as older age groups are considered. In part this is the result of an even greater disparity in educational levels of the two groups: 1960 census data show a definite increase in the differential between white and nonwhite educational levels as age increases over the range 20 through 34.[13] However, an additional aspect that needs to be considered is the impact of job experience and economic change upon income opportunities. It is conceivable that the acquisition of job experience by the Negro enables him to offset some of the initial advantage that whites possess by virtue of the differential in educational levels. Also, it is possible that the processes of economic growth will tend to offset some of his disadvantage.

In order to explore these possibilities, the probability of an individual's appearing in the lowest income class employed in this paper was estimated by age group for each of the years 1955 through 1958. By comparing these probabilities as we move through the period 1955-58, it is possible to obtain some idea of the impact of additional years of job experience and the pattern of economic growth upon the income opportunities of the two races. The results of these calculations are shown graphically in Figure III. The trend lines which are indicated for each age group have been estimated visually as there were too few observations to permit any systematic determination.

An examination of the data for the two youngest age groups shows that both Negroes and whites benefit substantially from the combination of job experience and economic change. With the youngest age group the probability of being in the lowest income class decreases from about 60 per cent for both whites and Negroes to values of slightly more than 20 per cent for whites and between 35 and 40 per cent for Negroes. Of course, part of this decline

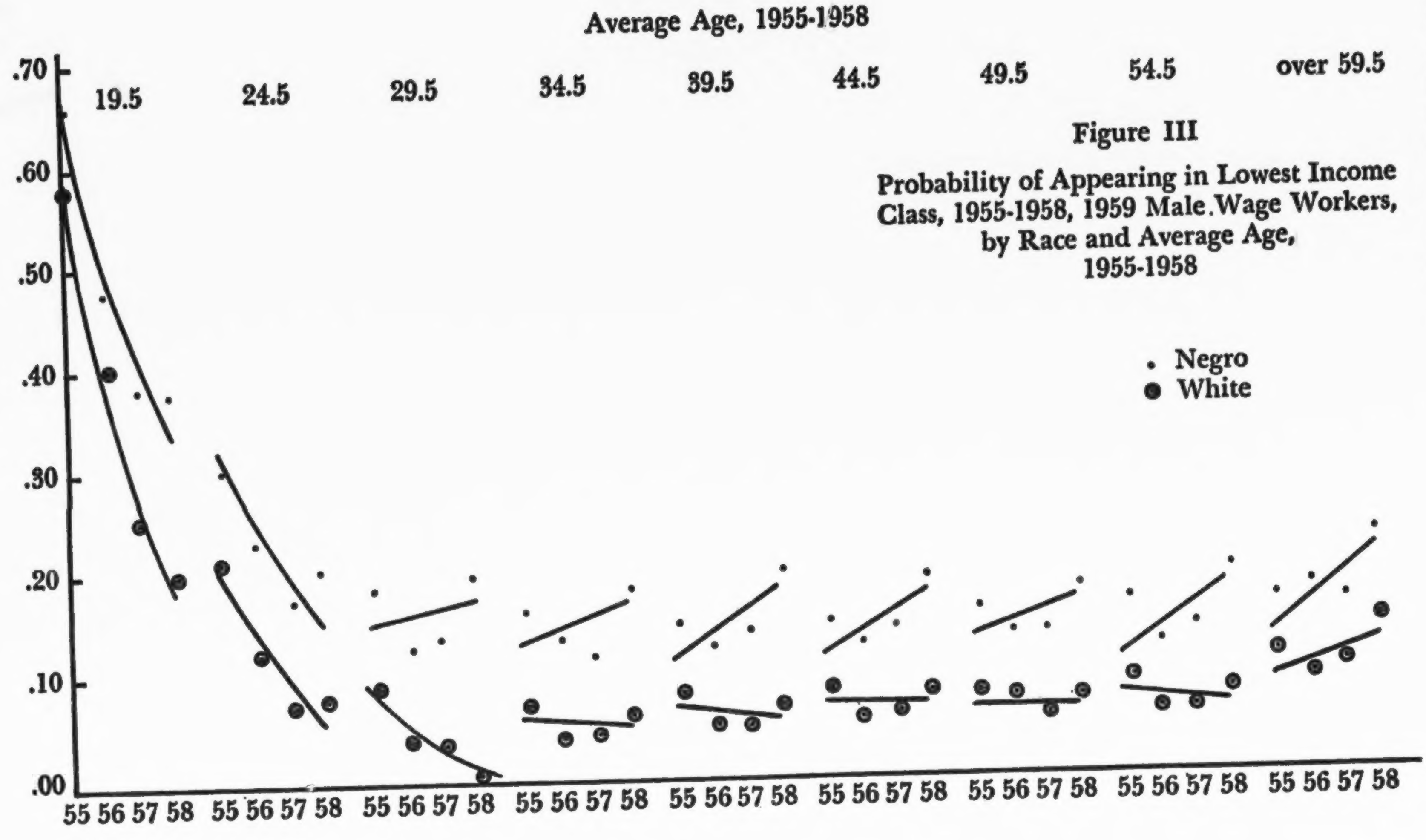

Figure III

Probability of Appearing in Lowest Income Class, 1955-1958, 1959 Male Wage Workers, by Race and Average Age, 1955-1958 may simply be the result of individuals' shifting from partial labor-force activity to full activity as they complete their formal education. Whatever the combination of factors involved, the white male's probability of being in the lowest income class drops more substantially during these two earliest periods than does the Negro's. Thus, the Negro's initial disadvantage is compounded during these periods.

Once beyond these two youngest age groups, the white male continues to profit from the combination of work experience and change through the group with an average age of about 30, but the Negro male does not. In fact, for all the succeeding age groups the combination of experience and economic change during the period 1955-58 actually led to an increase in the probability of a Negro male's appearing in the lowest income class. On the other hand, white males showed either modest decreases or little change in their chances of appearing in this income class until the oldest age group was reached. An explanation of the Negro's worsened absolute position can be found in the economic downturn that characterized 1958; however, the Negro's worsened absolute position is not the important thing for our purposes. What is important is the obvious implication that the relative position of Negroes is not improved by the combination of additional years of job experience or the normal processes of economic change. Quite the contrary, there is every indication that the impact of these forces is a further worsening of his standing.[14]

CONCLUSIONS

In the reading of any research paper a point is reached at which a reader is prompted to ask, "What does this all mean? What is its significance?" Assuming that we have reached that juncture, let me indulge my artistic impulse and sketch in rather broad and symbolic strokes the portrait of Negro impoverishment that emerges from the more technical aspects of this paper.

Perhaps the appropriate art form for conveying the desired impression is the triptych. For the first scene, there is a representation of the young Negro entering a bazaar (symbolic of the labor market) carrying a sack in which are contained the best products of his skill. As he surveys the surroundings of the bazaar, he is surprised to discover that there are other merchants (fair-skinned ones) already ensconced in the choice positions and, more than that, he is shocked to find that many of these are attempting to sell a product which is admittedly superior to his. He begins to wonder whether the craftsman to whom he was apprenticed has taught him all that he should know in order to be able to vie with his fair-skinned competitors and, as he contemplates the unfavorable location from which he will have to merchandise his wares, he becomes actually aware of the possibility of economic failure.

In the second scene, picture this same Negro, now several years older, still selling the same product. However, several things have changed. His once unfavorable position in the market place is no longer his; rather, he now finds himself in an even more disadvantageous location. The product he sells has been substantially improved as he has acquired greater and greater skill. However, his competitors have also improved their merchandise, perhaps even more than he has been able to better his. And the "times": economic conditions are markedly improved over the previous scene, but the improvement seems to have helped his competitors more than him.

The third and final scene depicts our same Negro, again several years older. He has now been pushed further back among the stalls of the market place. There is no longer any question of his competing with his fair-skinned rivals; the product he sells is serviceable, but no more than that. His face now possesses the resigned look that accompanies acceptance of one's position in life. He has arrived at the economic level which was to a great extent preordained for him at the time he first set foot in the bazaar.

APPENDIX

Certain of the parameters used in disaggregating the observed income transition matrices into regional matrices require some further explanation as to their meaning and the sources of the values of these parameters which are used in the calculations. The parameters in question are defined as follows:

(a) $$\alpha_{ik} = \frac{(N_i)_k}{\sum\limits_k (N_i)_k}$$

(b) $$\lambda_{ik} = \frac{(N_i)_k}{\sum\limits_i \sum\limits_k (N_i)_k}$$

(c) $$\rho_j = \frac{\sum\limits_i P_{ij}\overline{N}_{ij}}{\sum\limits_i \sum\limits_j P_{ij}N_{ij}}$$

where N denotes the number of individuals in the ith income class of a region (denoted by k) at a given point in time, the subscript j denotes income class in a succeeding period, and $\overline{N}$ indicates the number of individuals in the ith income class in the aggregate at a given point in time.

Estimates of the values of α_{ik} and λ_{ik} were obtained from *United States Census of Population, 1960, United States Summary, Detailed Characteristics,* PC (1), 1D, Table 263. This table describes income in 1959 of persons by age, color, and sex for the regions. In calculating α_{ik} and λ_{ik}, income classes identical to those used in the text of the paper were employed.

The value of ρ_1 used in the calculations was obtained from the sample data used to calculate the various transition matrices.

FOOTNOTES

1. See, *inter alia,* Wilbur J. Cohen and Eugenia Sullivan, "Poverty in the United States," *Health, Education, and Welfare Indicators,* February, 1965; Michael Harrington, *The Other America: Poverty in the United States* (New York: Macmillan, 1963); and Robert J. Lampman, *The Low-Income Population and Economic Growth,* U. S. Congress, Joint Economic Committee, Study Paper No. 12, 86th Congress, 1st Session, December 1959.
2. The discussion to follow makes no pretense of theoretical elegance. For a highly sophisticated treatment of income distribution as a stochastic process, see D. G. Champernowne, "A Model of Income Distribution," *Economic Journal,* June, 1953, pp. 318-51.
3. *United States Census of Population, 1960, United States Summary, Detailed Characteristics,* PC (1), 1D, Table 219.
4. Gary Becker, *The Economics of Discrimination* (Chicago: University of Chicago Press, 1959).
5. The term "white" is used in the ensuing portions of the paper for convenience purposes despite its being technically somewhat inaccurate. The data employed are classified by all workers and Negro workers. Thus, the "white" category is derived as a residual. However, it includes nonwhites other than Negroes, although they are undoubtedly few in number.
6. Milton Friedman, *A Theory of the Consumption Function* (National Bureau of Economic Research [Princeton: Princeton University Press, 1957]). Some evidence relating to this phenomenon is presented in Ralph B. Bristol, Jr., "Factors Associated with Income Variability," *American Economic Review,* May, 1958, pp. 279-90.
7. See Appendix for detailed definition of α_{1k}.
8. It might appear that two additional constraints could be obtained from expression (5) by considering more than one region. However, these constraints are implied by (5) and thus are redundant.
9. Again, it might appear that additional constraints could be obtained by varying j. However, these are also redundant.
10. See Appendix for detailed definition of λ_{1k}.
11. With a 1959 reference date for age, the average age over the period 1955-58 of the groups being analyzed is approximately that of the lower limit of the classification; e.g., those who were aged 20-24 in 1959 had an average age of 19.5 over the period 1955-58. In order to avoid confusion, the age classes have been translated into approximate average ages in the text.
12. *United States Census of Population, loc. cit.*
13. *United States Census of Population, op. cit.,* Table 173. For the 14 to 24-year-old male group the median number of years of school completed by nonwhites is 9.6 years compared to 10.8 for whites, a difference of 1.2 years. For the 25-29 group the difference is 1.9 years (12.4 for whites and 10.5 for nonwhites), while in the 30-34-year-old group the

difference increases to 2.5 years (12.2 for whites and 9.7 for nonwhites).

14. Admittedly, it may be questioned whether the time period for which the data are available represents a normal period of economic growth in that the recession year of 1958 is the concluding year. However, cyclical swings of the magnitude of the 1958 downturn are a reasonably normal part of our economic life, and what we have emphasized here is the worsening of the Negro's position relative to whites, not his position in absolute terms. Obviously, before any conclusion could be drawn about the impact of job experience and growth upon the absolute position of the two racial groups, data decribing the full course of a business cycle would be required. But, for purposes of assessing the impact of these factors on the relative position of Negroes, the data at hand are probably quite sufficient.

PART II

Political Approaches
Two Views of Equal Opportunity Legislation

3

EFFECTIVENESS OF EQUAL OPPORTUNITY LEGISLATION

George Schermer*

My first exposure to governmental policy on non-discrimination in employment occurred in the late 1930's. As an employee of the Chicago Housing Authority, I was assigned the task of reviewing and adapting to local conditions certain clauses having to do with social policy in the standard contracts supplied by the United States Housing Authority. My recollections are hazy concerning the precise language, but there was a clause requiring that contractors employ non-whites in proportion to their numbers in the population as established by the latest census. If that was not the language, that was the way it was interpreted.

The form contract specified that there was to be no discrimination in occupancy because of religion or national origin; race and color were not mentioned. There was a "gentleman's agreement" that the racial character of the neighborhood would not be changed. Thus, a project in a white neighborhood would be all white; one in a Negro neighborhood would be Negro; and one in a mixed neighborhood would be mixed.

In Chicago the definition of neighborhood was so finely drawn that, when the Jane Addams Houses were built on both sides of Taylor Street, units were rented to whites only north of Taylor and to whites and Negroes south of Taylor, because that had been the pattern before clearance.

This concept of neighborhood spilled over into the employment policy so that contractors building on the North Side of Chicago were required to employ fewer Negroes than those building on the West or South Sides of the city. The ratios were not broken down by sub-contract or skill. If the required ratio was 10 per cent and 10 per cent of the total man hours were performed by

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Negro common laborers, the equal opportunity requirements were met.

I do not recall that the Authority itself had to comply with any quota requirements. In any event, the Authority employed no more than two or three non-whites in its administrative staff until an all-Negro project was built, at which time Negroes only were employed for the project staff.

If we are inclined to look back upon those requirements with critical amusement, let us remind ourselves that those were beginnings and that probably no other government agency was doing more or as much.

THE MARCH ON WASHINGTON

One of the great political reversals of American history was the shift of the Negro voters from their traditional adherence to the party of the Great Emancipator to the Democratic Party of President Roosevelt. In 1932 Negroes were still voting Republican, almost unanimously. In 1936, in the urban areas outside the South, they were voting Democratic with almost equal fervor. By 1940, the switchover was nearly complete. A major factor contributing to the change was the fact that the welfare programs advanced by the Roosevelt New Deal were all that kept Negroes from starving to death in the large cities. Equally important, however, had been the personal concern of President and Mrs. Roosevelt. Never before had a president or his wife demonstrated a personal recognition for the Negroes' aspirations for dignity in a manner that carried conviction, such as Mrs. Roosevelt's resignation from the D.A.R. when that organization barred Marian Anderson from singing in Constitution Hall.

It seems paradoxical, therefore, that the most critical confrontation ever to occur between a president and Negro leadership was actually between Roosevelt and the then strong man of the emerging Negro civil rights movement, A. Philip Randolph. The confrontation had developed before the 1940 election, but the Negro community seemed unaware of it. It came to its climax in June of 1941.

The story has been chronicled by Herbert Garfinkel in his book, *When Negroes March.* I comment on it briefly here because it is pertinent to the general thesis of this paper: that government and law have come to the aid of Negroes only when they (Negroes) have confronted the nation (or a locality) with a challenge and have tended to be ineffective unless the challenge was present.

Enthusiastically loyal though they were to the New Deal, Negroes in the United States had not gained much in the eight years from 1932 to 1940. The New Deal and the posture of the presidency had provided hope and the WPA, but no significant gains in education, training, employment, or housing. The 1940 census, taken in April 1940 *after* the war had begun in Europe, but *before* its impact had registered significantly on the American economy, reported unemployment among Negroes at 22 per cent as compared to 15 per cent among whites. That figure was misleading because thousands of employable Negroes had simply dropped out of the labor market. In cities such as St. Louis, Chicago, and Cleveland, the percentage of Negroes on welfare was three to four times that for whites. Eighty-nine per cent of the employed Negroes were in service and unskilled occupations compared to 53 per cent among whites.

In 1940 the *Pittsburgh Courier,* sensing that the emerging defense effort would offer new and unusual opportunities for Negroes, sponsored the creation of a Negro Committee on National Defense with Rayford W. Logan of Howard University as chairman. This committee pursued the traditional forms of pressure on Washington — mainly polite representations to friendly congressmen and the White House. The results were nominal. A clause forbidding discrimination in the selection of trainees was inserted in the Selective Service Act, but it was almost completely negated by another clause that permitted the heads of the Army and Navy to reject those who were unacceptable.

Under the pressure of rising war clouds and the need for national unity, the posture of the White House shifted from one of concern for the aspirations of Negroes to compromise with the traditional prejudices and practices of both the armed forces and the nation's industrial apparatus.

A. Philip Randolph, President of the Brotherhood of Sleeping Car Porters, more than anyone else, recognized that this was the moment for Negroes to strike their own blow in the war for democracy. If there was to be victory it would have to come on two fronts, overseas and at home. If Negroes did not get themselves out of the back rows for this performance, they might never move forward.

On September 27, 1940, in the thick of the presidential campaign, Randolph, Walter White, National Secretary of the NAACP, and T. Arnold Hill of the National Urban League called upon President Roosevelt for a stronger policy against discrimination in the armed forces. Immediately after their departure, and thus with the implication of their consent, the White House released a statement that "the policy of the War Department is not to intermingle colored and white enlisted personnel in the same regimental organizations."

This statement led to a serious breakdown in relationships between the Administration and the national Negro leadership. In January 1941, the NAACP conducted protest meetings in 23 different states calling for picketing of national defense plants. That same month A. Philip Randolph called for 10,000 Negroes to march on Washington. There was no immediate response to either the NAACP's plea for pickets or Randolph's call to march. Negroes in the United States had long been conditioned to defeat and were content with pleas for small favors. A posture of marching and demanding was too unorthodox to be taken seriously. Nevertheless, by May of 1941, March on Washington Committees had been organized in Washington, New York, and Chicago, and the Negro press was enthusiastically endorsing the idea. By early June, the March idea had caught fire among Negroes to such an extent that the Administration appealed directly to White and Randolph to call it off. They refused. On June 25, 1941, President Roosevelt issued the famous Executive Order 8802, and Randolph agreed to "postpone" the march. The march was finally held on August 28, 1963.

Executive Orders 8802 and 9346

The first of the orders, issued in 1941, created a Fair Employment Practices Committee within the War Manpower Commission headed by Paul McNutt. When McNutt interfered with the committee's plan to conduct public hearings on employment practices in the railroad industry in 1943, several members resigned, and the committee fell apart. On May 29, 1943, President Roosevelt issued Executive Order 9346 reconstituting the committee, giving it relatively independent status and extending its powers. The order declared that it was "the policy of the United States that there shall be no discrimination in employment of any person in war industries or in government by reasons of race, creed, color or national origin; and it is the duty of all employers, including the several federal agencies and all labor organizations to eliminate discrimination in regard to hire, tenure terms, or conditions of employment or union membership." Contracting agencies were directed to include in all contracts a provision obligating contractors not to discriminate. Implicit in the order was the power to rescind a contract in instances of non-compliance with such a provision.

The first committee began with a budget of $80,000 and a professional staff of seven. In 1945 the second committee received an appropriation of $500,000 and employed a professional staff of 56.

By 1945 the committee was receiving complaints at the rate of 4,000 per year. However, in the entire war period only 52 complaints were reported as satisfactorily adjusted. A total of 22 hearings were held involving 93 employers and 34 unions.

The committee had no subpoena powers, and its implied power to rescind contracts was probably never taken seriously. Unions in particular were impervious to the order since they were not contracting parties.

On the record, then, the wartime FEPC's achievements were puny indeed. More than 10,000 complaints were filed, and only 52 were reported as satisfactorily adjusted. However, during that same period, the nation witnessed by far the most impressive advance in the economic position of Negroes ever made. During that period the rise in incomes for the Negro population over the nation as a whole not only kept pace with that of whites but began to catch up. In 1939, the median income for Negroes in urban areas had been less than 40 per cent of that of whites. By 1949 it had risen to just under 60 per cent.

The greatest gains were made in what might be called the "middle occupations." In 1940, 57 per cent of employed Negro males outside the South were in unskilled labor and service occupations; 20 per cent were operatives; and 19 per cent were in the skilled, white collar, technical, and professional classes. By 1950 the ratio of employed in unskilled labor and service occupations had declined to 46 per cent; the ratio of operatives had increased to over 27 per cent; and the skilled, white collar, professional, and technical workers had increased to 24 per cent. These data become even more significant when one considers that the 1950 ratios include those additional hundreds of thousands of Negroes from the South and from the ranks of the unemployed who had moved into the labor force of northern and western cities.

Was this very substantial improvement the direct result of the Executive Orders and the Fair Practices Committees? No one familiar with the situation would agree. The greatest single factor, by far, was the wartime demand for manpower. The second most important was the impact of wartime psychology. Negroes by the hundreds of thousands believed the war represented opportunity and that the nation could not and would not refuse them a place in the war effort. They acted on their beliefs. Finally, even though there was tremendous resistance from many employers, unions, and white employees, there was a greater inclination among whites to accept partnership with blacks in the war effort.

Did FEPC have any impact at all? My guess is that it was very substantial. The filing and processing of individual complaints accomplished little, but the fact of the order and the presence of the committee must have constituted both encouragement to Negroes and sanctions for those who had to make the decisions.

In 1944 Senator Russell of Georgia obtained the passage of an amendment to an appropriation bill preventing the President from using appropriations to pay the expenses of any agency unless Congress specifically authorized that use. His target was the FEPC, and the Committee came to an end in 1945.

Efforts to pass a federal fair employment practices law were lost by Senate filibuster in 1946 and again in 1950. Presidents Truman and Eisenhower both continued the Executive Orders and committees for the administration of the orders. However, the postures of the committees were weak, public respect and confidence declined, and complaints dropped to as low as 150 per year.

The greatly strengthened Order 10925 issued by President Kennedy in 1961 is discussed later.

STATE AND LOCAL FEPC LAWS

In 1944 New York's Governor Thomas Dewey appointed a commission to study employment practices in that state. The commission, headed by Charles Evans Hughes, recommended that the state adopt a law prohibiting discrimination in employment and creating a commission for its administration. The proposed legislation was passed in 1945. While there have been many modifications, the New York law has been a model for similar legislation in twenty-one other states. In addition to these twenty-two, six other states have laws barring discrimination in employment but do not provide for a special administrative agency. Twenty cities, most of them in states which also have fair employment laws, have adopted fair employment ordinances and created agencies for their administration.

The primary differences among the various state laws are:

(a) Coverage — some states cover *all* employers, some exempt employers with fewer than 5, 8, or 12 employees, while Illinois and Missouri exempt employers with fewer than 50.

(b) Some have the power to subpoena witnesses and/or to initiate complaints, and some do not.

(c) Some provide for full-time salaried commissioners, some for paying commissioners per diem, and others for paying commissioners nothing.

(d) Procedures for the enforcement of commission orders and the nature and severity of the penalties vary widely.

City ordinances are not discussed since all but one of the cities are in states that also have fair employment laws. With the exceptions noted above and below, the state laws tend to conform to the New York model, which declares it to be an unlawful employment practice:

(a) For an employer to refuse to hire or employ, to discharge or to discriminate against an individual in compensation, conditions, or privileges of employment;

(b) For a labor organization to exclude or to expel from membership or to discriminate against any member, employer or employee of an employer;

(c) For any employer or employment agency to print, circulate or cause to be printed or circulated, any statement, advertisement or publication, or to use any form of application for employment which expresses directly any limitation, specification or discrimination,

if any of those acts, limitations, or statements are related to race, color, religion, or national origin. The law further declares it to be an unlawful practice:

(d) For an employer, labor organization or employment agency to discharge, expel or otherwise discriminate against any person because he has opposed practices prohibited by the act or because he has filed a complaint, testified or assisted in a proceeding under the act.

Michigan and Ohio laws, which were drafted much later, are more precise in their definitions of unlawful practices pertaining to employment agencies and joint apprenticeship committees.

Powers of Administrative Agencies

Seventeen states provide for relatively independent administrative commissions, while five have set up divisions within established departments. New York, Massachusetts, Ohio, and Rhode Island invest the primary power and responsibility for administration of the law in the commissioners. New York provides for seven full-time, highly-paid commissioners. The three others pay part-time salaries. All the other state laws provide that the primary responsibility for administration shall rest with a director and staff selected by the commission, with the commission acting as a policy board. However, it is almost universal that the power to conduct formal hearings and to issue findings and orders rests only with the commissioners. (Nearly all the states have provisions for paying commissioners a modest per diem rate.)

The commissions or divisions are empowered to:

1. Receive, investigate, and pass upon complaints alleging un-

lawful practices. (Ten of the state commissions are empowered to initiate complaints, and in six others the attorney general is so authorized.)

2. Endeavor to resolve the complaint and to eliminate the unlawful practice by conference and persuasion.
3. Hold hearings, subpoena witnesses (although not all have the subpoena power), compel attendance, administer oaths, take testimony, require the production of records. For enforcement of these powers, the agencies must go to court.
4. Issue orders requiring respondents to cease and desist from unlawful practices and to take affirmative action such as to remedy the specific practice complained of, to instate or reinstate the applicant or employee, and to reimburse for loss of income.

The laws also generally provide that the commissions shall or may:

(a) Promote and conduct educational programs to further the objectives of the law.
(b) Create and service advisory committees or agencies to further the objectives of the law.
(c) Conduct studies of discriminatory practices and to issue reports and findings.

While the power to conduct studies has been generally interpreted as meaning the power to study *patterns* of discriminatory practice and to seek to remedy such practices by persuasion, only the Ohio and Philadelphia Commissions are empowered to hold hearings, to compel the appearance of witnesses, and to issue formal findings.

About half of the state commissions are empowered also to administer laws prohibiting discrimination in either public accommodations or housing or both.

The Weight of Government Support

The strength and power of an administrative agency of government is likely to be measured more in terms of the *apparent* support it receives from the administration, the legislative body, and public opinion than in the statute itself. The most authoritative report of the operation of fair practice laws to date has been done by Paul H. Norgren and Samuel E. Hill in their *Toward Fair Employment,* published by Columbia University Press.

Norgren and Hill report that in 1960 the New York Commission received an appropriation of $950,000; California with two-thirds as large a Negro population plus an almost equally large Spanish minority population received $203,000; Ohio with six-tenths as many Negroes had a budget of $100,000; and Michigan with half as many Negroes had a budget of $148,000.

The comparison of state appropriations in relation to size of minority population is, of course, the crudest kind of measure. Conditions differ among the states; some of the commissions focus upon employment only, while several embrace complex programs including housing, public accommodations, education, and community relations. In some states such as Pennsylvania, there are strong commissions in the larger cities that share in the administration of the laws and may collectively have larger appropriations than the state commission.

Nevertheless, it seems that Norgren and Hill's basic thesis holds. They find that there is a fairly close correlation between the relative size of the appropriation and administrative staff and the effectiveness of the law. In their estimate, the only really effective operations were those of the New York State and City of Philadelphia Commissions, both of which received much the greater appropriations in relation to size of constituent population. There is no quarrel with Norgren and Hill's thesis as far as it goes, but it can be contended that there is more than a mechanical relationship among dollars appropriated, staff employed, and effectiveness. The size of the appropriations may be as much a symptom of success as a cause. It may be that the size, posture, and power of the minority public and the concomitant posture of the political powers have as much or a greater impact.

Complaint Procedure and Commission Strategy

The underlying assumptions upon which the New York act was drafted have permeated the operation of every fair employment commission. These were: (1) Negroes were barred from jobs by conscious, overt policies and practices of discrimination; (2) once such practices were outlawed, most employers, having respect for the law, would desist; (3) Negroes, waiting eagerly at the gates of opportunity, would pass through as soon as the bars were down; (4) the law would be more effective if it were clothed with education and persuasion; and (5) coercion would be exercised only as a last resort.

All of the commissions, with the exception of New York, were extraordinarily modest and apologetic in their initial requests for funds, and most of them never changed in that respect. Undoubtedly that posture was imposed by the governors, state fiscal authorities, and the general climate in the legislatures. This modest approach was in no way challenged by the Negro or any civil rights groups.

Once the law was on the books a victory had been won, and the concerned people went home to rest.

The commissions all started bravely enough with the publication of regulations and succinctly-drafted informational and educational pamphlets telling employers what to do and what not to do and telling the minority group public about its rights and how to file complaints. Sporadic educational conferences were conducted, mainly for the edification of the already informed and committed. Employer representatives attended the first few such conferences but were so persuaded by soporific assurances that they were not threatened with vigorous compliance activity that their attendance fell off almost completely.

The commissions went out of their way to assure both employers and prospective complainants that the law could function *only* if the complainant was fully qualified for the job. Since most Negroes already suffer from extreme lack of self-confidence, those that heard the message were persuaded that they ought not to apply or, if they were turned down, not to file complaints.

The complaint procedure is not discussed. It is not important. There are not enough complaints to make it worth the time. The major mistake in the entire enterprise was the reliance upon complaints.

The New York State Commission, which had by far the largest complaint load, reported a total of 3,262 complaints adjusted after 15 years of operation, roughly 200 a year. New Jersey averaged only 50 per year and Philadelphia slightly over 40. Space does not permit a detailed analysis. A notion of what even these small figures mean is gained if it is mentioned that only one-third of the New York cases involved findings of "probable cause," while the other two-thirds involved technical violations and findings of practices "not unlawful but discriminatory" that were adjusted. In Philadelphia a complaint of an unlawful entry in an application form was reported as "adjusted" when the form was corrected even though no person was found to have been refused a job.

Why so few complaints were filed or why so few of those filed proved to be valid has been the perennial subject of the annual meetings of the Conference of Commissions on Human Rights. The explanations ranged from the declaration that the minority community "didn't have the word," to the idea that Negroes just were not qualified or motivated, to the suspicion that the over-cautious posture of the commissions simply did not inspire public confidence.

As each explanation became popular, the commissions would alter the emphasis of their programs. For a time there were increased efforts to channel information to the minority public. Then there was renewed emphasis upon encouraging Negroes to undertake training to improve their competence. Eventually, a few commissions began the re-examination of the assumptions upon which the laws were based and which had tended to govern the strategy of the commissions.

Now, before further pursuing the effectiveness of the laws, we should bring ourselves up to date on the current Executive Orders and Title VII of the Civil Rights Act.

EXECUTIVE ORDERS 10925 AND 11114

Early in 1961 President Kennedy issued Executive Order 10925. The order differed from the earlier ones under Roosevelt, Truman, and Eisenhower in several respects:

(a) The Roosevelt Order had placed responsibility for administration and enforcement with the President's Committee. The committee was handicapped by lack of subpoena power and absence of explicit enforcement procedures. The only sanctions available were the implied threat of contract cancellation or penalties which could be exercised only by the contracting agencies which, in their alliance with industry, were not inclined to act. In the end, the Russell Amendment crippled the President's Committee.

(b) Under Truman and Eisenhower all responsibility for compliance rested with the contracting agencies. The President's Committee could only study and recommend. The pressures upon the contracting agencies were nominal and upon contractors almost non-existent.

(c) The Kennedy Order was explicit, whereas the earlier ones were only implicit in granting to the President's Committee or the contracting agencies the following compliance powers:

1. Recommend to the Department of Justice that proceedings be brought against contractors to enforce the non-discrimination provisions or for falsification of information.
2. Terminate all or portions of contracts, make continuance of contracts contingent upon adoption of programs of compliance, or disqualify firms from future contracts until the President's Committee is satisfied that the contract requirements are or will be met.

3. Collect and publish information and data to be supplied by each contractor concerning patterns of minority group distribution in the work force and all steps and procedures taken to remedy inequities.

(Executive Order 11114 clarifies and extends 10925, explicitly applying the order to all plants of a contractor, whether or not involved in the production under contract, to sub-contractors and to contractors on grant-in-aid work.)

In addition, the Committee and/or the contracting agencies are authorized to conduct public hearings, but do not have the power of subpoena. Since 1941 each of the succeeding Presidental Committees established a complaint procedure. In the absence of a statute delegating explicit enforcement powers and defining procedures, the processing of complaints has been cumbersome and indecisive.

The major innovations of the Kennedy-Johnson Committee have been the requirements for reporting (Form 40) and compliance reviews. The compliance reviews have been in the nature of compulsory self-surveys. Many contracting firms have resented the process, but most of them not only have gone through the motions, but appear to have taken it quite seriously, at least in the first two years.

A second innovation of the committee is the *Plans for Progress* program which has used the prestige of the President to persuade many of the nation's largest corporations to pledge themselves to voluntary plans to advance and equalize employment opportunities for minorities. While the President's Committee has issued positive reports on this effort, many objective observers have been cautious and often dubious about the tangible results.

TITLE VII OF THE CIVIL RIGHTS ACT OF 1964

The latest addition to the legal armament for equal employment opportunity is Title VII of the Civil Rights Act of 1964. With this title we now have a federal fair employment law that will reach into all of the states. Covered employment includes all employers, employment agencies, and labor unions engaged in industries affecting commerce. It goes into effect for employers of 100 or more employees in July 1965, for those of 75 or more in 1966, and eventually for those employing as few as 25. An Equal Employment Opportunities Commission is established to administer the law. Extensive provisions are made to assure that states having equal employment laws shall retain jurisdiction, providing the requirements of federal law are met. The procedures for receiving, investigating, and adjusting complaints by persuasion are similar to those employed by the states. However, the federal EEOC will have much less muscle, as an enforcement agency, than the typical state commission.

If efforts at conciliation fail, the complainant must be notified of the failure and of *his* right to file an action in a federal district court. The Commission does not bring the action. The Attorney General may intervene. If the court finds evidence of discriminatory practice, it may enjoin the respondent against the continuance of the practice. If the respondent fails to comply with the court's orders, the Commission may commence proceedings to compel compliance.

The act is heavily weighted with protections for the respondent. In the light of the history of complaint procedures before state commissions to date, not much is likely to come of complaints under Title VII.

One highly unusual provision in Title VII permits the Attorney General to file an action for an injunction where he has cause to believe that any person or group of persons is engaged in a "pattern or practice of resistance."

One other unusual provision prohibits discrimination because of sex. This may prove to be the most controversial and precedent-shattering aspect of the law, since much of the existing state and federal legislation regulating the employment of women may either be in conflict or [illegible] interpreted as discriminating against men. Many union contra[illegible]y also be in conflict.

EFFECTIVENESS OF THE LAWS

There have been many pronouncements and claims by both the proponents of fair employment laws and the several administrative commissions concerning the effectiveness of the laws. The only really objective and definitive attempt at evaluation to date is Paul Norgren and Samuel E. Hill's *Toward Fair Employment*. Norgren and Hill admit that it is extremely difficult to isolate the law's impact from a whole series of other factors such as up and down trends in the economy, shifts in technology, the political and social climate, the temper and sophistication of the minority groups, education and training, and geography. They compare the rate of improvement in employment patterns in New York State, which had an enforceable law throughout the decade of 1950 to 1960, with Indiana, Illinois, and Missouri which did not. The overall ratio of nonwhites to whites in these three states is comparable to that in New York State, and the total rate of increase in the several states is also comparable.

The improvement rate was many times greater in New York than in the tri-state area. Norgren and Hill developed an index which registers the rate of gain or loss for Negroes in their advancement into occupations of higher skill, status, and pay, allowing for relative increase in the population. The gain in New York for managers and officials was 164 compared to 6 for the tri-state area, in retail sales work it was 41 to 15, for foremen it was 75 to 37, and for construction craftsmen 46 to 8. If the gains in New York are solely attributable to the fair employment law, then we have proof positive. The differences are not nearly so great, however, if other states such as New Jersey, Pennsylvania and Michigan — also with fair employment laws — are used for comparison. Norgren and Hill did not apply their index to the other states, primarily because several of them did not adopt the laws until the middle of the decade, and also because other factors were less comparable.

Rarely, if ever, do the commissions report unsuccessful disposition of valid complaints. On the average, from 70 to 80 per cent of all complaints are dismissed on such grounds as "no probable cause," "no discrimination found," "lack of jurisdiction," "insufficient evidence," "withdrawn by complainant."

From 19 to 29 per cent are reported as "discrimination found and satisfactorily adjusted." Less than one per cent have reached the point of a formal finding of "unlawful discrimination" after a public hearing. (Among those that *have* reached that stage, however, the orders to cease and desist the practice and to provide affirmative remedy to the complainant have been firm, and those appealed have been generally sustained by the courts.)

In many of the "adjusted" complaints, the adjustment consisted of a formal, binding agreement to cease and desist with remedies to the aggrieved party. The "adjusted" complaints are not publicized by name of complainant and respondent, although they are reported statistically.

If a complaint cannot be adjusted by persuasion, the commissions become very cautious about formal findings of discrimination after public hearing. At this point they are moving toward litigation, and they have demonstrated great reluctance to risk reversal in court. Unless the facts will strongly sustain a finding of unlawful discrimination, the commission is likely to dismiss the complaint for insufficient evidence. This statement is based on personal experience and upon the statements of my colleagues in the field. Norgren and Hill do not make this point in their book.

The annual reports and public relations pamphlets of the commissions have, until the last two years, been replete with self-praise that few complaints have ever reached public hearing or litigation. This was the measure of success — that employers were not being harassed.

On the record it appears that the commissions were, indeed, very successful in gaining compliance on the *valid* complaints. The problem was that so few valid complaints were filed.

The paucity of complaints was especially apparent with respect to employment agencies and labor unions. "Probable cause" complaints against employment agencies averaged only six per cent of the total, and those against unions averaged under ten per cent. In Philadelphia, the ratios were four per cent and seven per cent, respectively. Norgren says, and I agree with him, that unions are overtly and legally responsible for only a small amount of the total practice of discrimination since they control hiring only in certain of the construction crafts, the railroads, the typographical crafts, and a few others. A few commissions, notably New York, Connecticut, and Massachusetts have won signal legal victories over discriminating unions, but the net change in employment patterns in the traditionally exclusive or segregated unions has been meager at best. Discriminating unions have been as obdurate and resistant as Southern school districts.

In summary, as to the effectiveness of the law, we can conclude:

1. The law *and* the administrative commissions have a high ratio of success in resolving, litigating, and obtaining compliance on those complaints that are well supported by the facts.
2. The valid complaints have been too few to have value in changing patterns.
3. Patterns of employment have improved much more rapidly in New York than in other states where there are large numbers of non-whites, and more rapidly in FEP states than in non-FEP states.
4. Until very recently, only New York and Philadelphia ventured beyond the complaint procedure in attempts to affect underlying patterns of discriminatory practice.

ELEMENTS FOR EFFECTIVENESS IN ADMINISTRATION OF EQUAL EMPLOYMENT LAWS

As indicated above, Norgren and Hill rate New York far ahead of any other state as to effectiveness of the law. They cite the city of Philadelphia as second, well ahead of other states and cities, but substantially behind New York.

There are three reasons, they say, why New York is ahead with Philadelphia having two of the three to its credit. The differences are these:

(1) The New York State and Philadelphia Commissions have gone far beyond the complaint procedure in bringing pressure upon employers for affirmative action.
(2) New York State and Philadelphia invest much more money and employ larger staffs (per capita) in administration.
(3) New York has the benefit of full-time, highly-paid commissioners.

Each of these three points merits much more discussion than can be permitted in this paper. The second (appropriations) can be disposed of by referring back to earlier comments on the weight of government support. Considering the size and complexity of the task, even the New York State and Philadelphia Commissions are grossly under-financed. The others, figuratively speaking, are being starved into ineffectiveness. Not only are the commissions unable to handle the work-load, but the public perceives that the governing powers are *making certain* of their ineffectiveness.

On the question of full-time, paid commissioners, there are arguments pro and con. I think that a very competent professional staff should be established, and commissioners should be paid generously on a per diem basis. It is unrealistic to expect commissioners to work without remuneration if the responsibility of adjudicating complaints rests with them.

Norgren and Hill's point about affirmative action is well taken. They may have given the New York and Philadelphia Commissions more credit in this respect than they deserve. Experience has revealed that few employers or their agents consciously adopt policies or procedures or consciously make decisions to discriminate. Few people will admit to themselves that they discriminate. Decisions that are, in fact, discriminatory are rationalized prejudicially by reasons that are considered proper and non-discriminatory. Even in those situations where an employer has taken all appropriate steps to prevent discrimination against qualified applicants for employment, little change will occur unless he takes affirmative measures to purposefully discover, encourage, recruit, train, and upgrade minority group employees.

A passive posture of neutral non-discrimination by an employer is only a little better than one of overt discrimination. A posture of neutral, umpire-like disinterest by a commission has been demonstrated as only slightly more effective than no commission at all. A commission must make its presence felt. It must use every opportunity to involve employers in affirmative procedures designed to bring the formerly-excluded minority group members into the employment structure.

A judicious application of compliance reviews, industry-wide investigations, public exposure, and coercion of recalcitrant employers, combined with industry advisory committees and demonstrated good will toward employers who have problems is necessary. Equally important are all of the actions and information programs required to capture the attention and participation of the minority public.

This paper does little more than mention "affirmative programs." Since space does not permit a lengthy discussion, it does not detail what such programs can or should be.

THE POSTURE OF THE MINORITY PUBLIC

We return now to the earlier thesis. The presidential orders and equal opportunity laws came into being in response to a posture of strength from Negro organizations, backed up by broadly-based, racially-inclusive civil rights, civic, and religious groups. Effective results have been obtained only when there was a happy combination of favorable circumstances and/or very strong support from the same groups that pushed for the legislative action.

Thus far we have seen little evidence that employers will act affirmatively even when there is a law on the books. There is equally little evidence that individual members of the minority groups will exercise the initiative under the laws which are there for their benefit. This means that reliance upon complaint procedures is unavailing.

We cannot, then, judge the effectiveness of the law in a vacuum. The law without active and aggressive civic action and support becomes neutral. On the other hand, if there is no law or no competent administrative agency, aggressive civic action can produce counter-actions, conflicts, and a stalemate. What is required is organized community pressure for constructive action, regulated by law.

ELEMENTS OF AN EFFECTIVE PROGRAM

The general conclusion, then, is as follows. The law itself and the administrative commissions are not the sole keys to an effective equal opportunity program. They are essential elements, and without them there would be no program. However, to have a successful program, all or most of the following conditions and elements must be present:

1. A local economy that is expanding; or, at least, one that is capable of offering job opportunities for a substantial part of the local population.
2. An alert, articulate, aggressive, and astutely-led civil rights or minority group movement.
3. Sufficient strength among the minority groups to impress the political powers and a concomitant political posture of support for strong and vigorous administration of the law.
4. A well-conceived, carefully-drafted fair employment law which grants to the administrative commission the powers to undertake affirmative compliance measures with employers, employment agencies, and labor unions.
5. A strong, independent administrative commission — adequately financed, well staffed and, above all, enjoying the support of the political powers.
6. A broadly-based community program involving employers, labor, educational, and civic institutions — vigorously committed to extending employment opportunity to all.
7. An educational system geared to meeting the needs of all the children, youth, and adults, particularly those whose cultural background is not equal to the demands of the modern economy.

Once more, in final summary, equal opportunity laws are essential elements of an effective equal opportunity program, but they are no more than elements of a much more comprehensive program.

4

EQUAL OPPORTUNITY AND EQUAL PAY*

Herbert R. Northrup**

During World War II, the shortage of labor, successful agitation for fair employment opportunities, and pressure from the government to open up jobs to all those who were being asked to risk their lives in war, combined to increase job opportunities for Negroes in areas which had hitherto been closed to them.[1] The booming demand for the products of industry which followed World War II helped to insure further gains for Negroes, as did the industrial expansion which resulted from the Korean War.

Nevertheless, even in these good times, Negroes suffered far more from unemployment than did white workers. The data in Table 1 show that Negro unemployment has always been substantially in excess of that for white workers; that male Negro unemployment has been twice that of whites since 1950; and that in every recession period since World War II—1949, 1954, and 1958—it has taken Negroes much longer to get back on the employment rolls than has been the case with white workers. Indeed, it can be stated that Negroes have not recovered from the 1958 recession. First fired and last rehired is still, therefore, an unhappy, but apt, description of the Negro worker's situation.

Other minorities—Puerto Ricans, Mexicans, American-Indians, and others—also often suffer discrimination in the labor market. Since the numbers of Negroes are so much greater, and their problems usually so much more severe, an analysis of equal opportunity laws in terms of Negro employment problems will provide a sound basis for understanding and evaluating the problems of minorities and the laws designed for their protection. A final

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*This article appeared in the *Management of Personnel Quarterly*, Fall, 1964, vol. III, no. 3, pp. 17-26.

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section of the article discusses laws designed to prevent discrimination because of sex or age.

TABLE I

UNEMPLOYMENT RATES BY SEX AND COLOR

	MALE			FEMALE		
Year	White	Non-White	Ratio N–W/W	White	Non-White	Ratio N–W/W
1940*	15.5	19.3	1.3	13.5	16.8	1.2
1948	3.1	5.1	1.7	3.4	5.2	1.5
1949	5.2	8.8	1.7	5.2	7.2	1.4
1950	4.5	8.9	1.7	4.9	7.8	1.6
1951	2.4	4.4	1.8	3.7	5.4	1.5
1952	2.2	4.5	2.0	2.9	4.8	1.7
1953	2.2	4.4	2.0	2.6	3.7	1.4
1954	4.4	9.2	2.1	4.9	8.2	1.7
1955	3.4	8.2	2.4	3.9	7.5	1.9
1956	3.1	7.3	2.4	3.8	8.0	2.1
1957	3.7	8.4	2.3	4.3	7.4	1.7
1958	6.1	13.7	2.2	6.2	10.8	1.7
1959	4.6	11.5	2.5	5.3	9.5	1.8
1960	4.8	10.7	2.2	5.3	9.5	1.8
1961	5.7	12.9	2.3	6.5	11.9	1.8
1962	4.6	11.0	2.4	5.5	11.1	2.0
1963	4.7	10.6	2.3	5.8	11.3	1.9

*The 1940 figure is from the census of that year.

Source: Unpublished paper "The Case for Structural Unemployment" by Robert Evans, Jr., based on data from the *Manpower Report of the President,* 1964. Courtesy of Professor Evans.

The Declining Utilization of Unskilled Labor

The experiences of the 1958 recession and the five-year period thereafter deserve special analysis in any discussion of the problems of Negro workers, for it was in this period that the proportion of Negro unemployment exceeded 10 per cent (Table 1), and during which the income differential between the white and Negro population widened. Of special significance is that the demand for production workers in industry has been relatively constant since 1956, while the demand for unskilled labor in industry has remained absolutely constant since then. Meantime, the great employment expansions have occurred in white collar and professional jobs. But Negroes have been concentrated in the unskilled jobs and have been underrepresented in the white collar jobs.

Moreover, three trends which culminated during this period accentuated the Negro employment problem. The first was industry's rapid substitution of machinery for unskilled labor. Ever higher minimum wages, the rapid rise under union pressure of unskilled labor rates, and the competition from West European and Japanese industry (with the much lower labor rates paid in these countries) all spurred this labor-replacement program. Negroes laid off as a result of these developments and young Negroes who found that industry was no longer hiring the unskilled became significant proportions of the hard-core, long-term unemployed.[2]

Concentration in Cities

Combined with this trend toward the elimination of unskilled labor were the rapid mechanization of agriculture and its declining importance in our economy. By 1960 only 6 per cent of the work force were employed on the farms. Nearly 2.5 million farms disappeared between 1940 and 1959, and all the loss was recorded for farms smaller than 260 acres.[3]

Negro and white farmers have flocked to the big cities of the North and West, which are now the growing centers of Negro population. One-fifth of the Negro population now resides in six such cities—New York, Chicago, Philadelphia, Detroit, Washington, and Los Angeles. Southern cities also have had increased Negro concentrations resulting from rural outmigration.[4] Thousands of Negroes who under conditions existent prior to World War II would have been underemployed as marginal farm workers migrated to the cities. As an unskilled group, they found that the demand of industry for their services was slight, and therefore they frequently were unemployed and on relief.

Declining Industrial Role of the Cities

While Negroes were migrating to the cities, industry was dispersing its plants away from the older locations. High city taxes, inadequate automobile transportation and parking facilities, and high-cost, outmoded, multi-story buildings, combined with the movement of the population westward, encouraged industry to expand facilities in the newer areas, either in the South or Midwest, or in suburban rather than in city locations.[5] Thus as the Negroes migrated in, often industry migrated out, or at least expanded elsewhere than where the new concentrations of Negro workers were found.

Negro Protests of the Early 1960's

Along with the increasing difficulties which Negroes were having in the labor force was the problem of segregation in public accommodations in Southern and some border states. To the increasing number of educated Negroes, this was particularly unpleasant. In 1961, Negro college students in the South began a series of "sit-ins" in restaurants and other places of service which denied Negroes equal treatment. Boycotts of businesses, patterned after a most successful one initiated by followers of Dr. Martin Luther King against a Montgomery, Alabama bus company, were initiated to fight segregation. The use of these economic weapons resulted in substantial successes in the attack against segregated facilities.

The results achieved by this direct action, combined with the slow results in obtaining school desegregation a decade after the United States Supreme Court ruled against such segregation, led to more direct action. In the North, the use of the weapons of conflict —boycott and picketing, especially—was aimed at improving the job opportunities of Negroes. In Philadelphia, for example, *The Bulletin,* one of the three daily papers, the Sun Oil Company, and the A & P supermarket chain all were boycotted into increasing the number of Negro employees. Whereas the fight in the South was for equal accommodations, that in the North was for better jobs —undoubtedly a step that the South will be pushed for once the goal of equal accommodations has proceeded a pace.

As in all protest periods, the direct action of Negroes to assert rights in the early 1960's gave rise to abuses and violence, with riots and numerous serious clashes of pickets and marchers with counter-demonstrators and police, North and South. These outbursts contributed to the intervention of the Kennedy, and later Johnson, Administrations and the passage in 1964 of an equal rights law with the first national fair employment, or equal employment opportunity, legislation.

Background of 1964 Equal Opportunity Law

The 1964 equal employment opportunity law was not enacted without prior executive and legislative experience in the field. In the early New Deal period, it was found, for example, that Negroes were systematically shut out of employment on public works projects. Accordingly, a program requiring the use of Negro workers consistent with their representation in the area population was inaugurated as early as 1934 and achieved some success. Nondiscriminatory provisions were also incorporated into bills for defense and wartime training.[6]

Presidential Committees

Then in order to avert a "march on Washington" by Negroes protesting continued job discrimination, President Franklin D. Roosevelt, by executive order, established a Fair Employment Practices Committee, which operated throughout the war period. Although the committee held hearings, dramatized the issue of Negro employment, and undoubtedly contributed to the increase in the utilization of Negro manpower, its lack of statutory authority prevented it from securing compliance with its orders when discriminating employers or unions balked. Thus it failed to make an appreciable change in the employment practices of the railroad or West Coast shipbuilding industries where employers' discrimination was buttressed by active support, if not leadership.[7]

The President's Committee on Fair Employment Practice ended its life in 1945 after being denied funds by Congress. It was followed by a succession of committees whose jurisdiction was limited to establishments doing business under contracts with the federal government. These committees were first set up by President Truman and then reorganized by each succeeding President. For the most part they relied on persuasion and publicity but until the Kennedy Committee on Fair Employment Problems, headed by then Vice-President Lyndon B. Johnson, was established in 1961, these committees did not exert much authority. Moreover, they lacked jurisdiction over unions, who are not party to government controls, but who, particularly in the construction industry, are often, as the suppliers of labor under closed shop contracts,[8] the focal point of discrimination.

The Kennedy Committee was the first to spell out sanctions and to give notice of attempting to enforce them. Such sanctions are ultimately the cancellation of the government contract. At least four contractors were blacklisted, at least temporarily, for noncompliance with fair employment, and threats of similar action were made to obtain results.[9] Such sanctions are often unworkable, because the cancellation of a key contract can endanger the country's defense program or otherwise interfere with the performance of a necessary governmental function.

Plans for Progress

Perhaps the most effective work inaugurated in this sphere was the "Plans for Progress," which were initiated by the then Vice-President Johnson early in the Kennedy Administration. Many of the country's large industrial employers were persuaded to review their employment practices, submit facts on employment by race and occupation, and report on programs designed to improve their employment of minorities. Although some companies have remained indifferent after signing pledges, a number have made vigorous and successful attempts to further Negro employment. In addition, others, which took the equal opportunity pledge lightly, changed their minds after Negro demonstrations began, and commenced pursuing a more vigorous policy toward fair employment.[10]

To overcome the weakness of its lack of jurisdiction over unions, another "Plan for Progress" was established by the Kennedy Committee. Most unions signed, pledging equal opportunity on jobs and in all aspects of union affairs, but a number of independent railroad and petroleum unions and seventeen AFL-CIO affiliates declined to participate. These unions were primarily in the industries where union discrimination has bulked large.[11]

State Fair Employment Practice Commissions

While the federal government was attempting to improve Negro job opportunities by extra-legal executive improvisations, twenty-five states enacted enforceable fair employment or equal opportunity laws.[12] (See Figure I). Beginning in 1945 with the enactment of the New York and New Jersey laws, those laws now cover most of the industrial states of the North and West plus the border states of Delaware and Missouri. In addition several cities, including Baltimore (the only border metropolis involved), Cleveland, Minneapolis, Philadelphia, Pittsburgh, St. Paul, and Toledo, enacted laws before the states in which they are located followed suit. Usually the state laws then permitted the municipal agencies to handle cases arising within their boundaries.[13]

Twenty-two of the state laws provide for a "fair employment," "equal opportunity," or "human rights" commission to administer the laws. These commissions may hear complaints, take testimony, hold hearings, issue orders, and apply to courts for enforcement. They are patterned to a large extent on the administrative model of the National Labor Relations Board or of state labor relations boards, except that in five states—Alaska, Delaware, Hawaii, New Jersey, and Oregon—the commissions are specially-created divisions of established state departments instead of independent agencies. Three states—Idaho, Iowa, and Vermont—make discrimination a misdemeanor punishable by fine or imprisonment. In such cases,

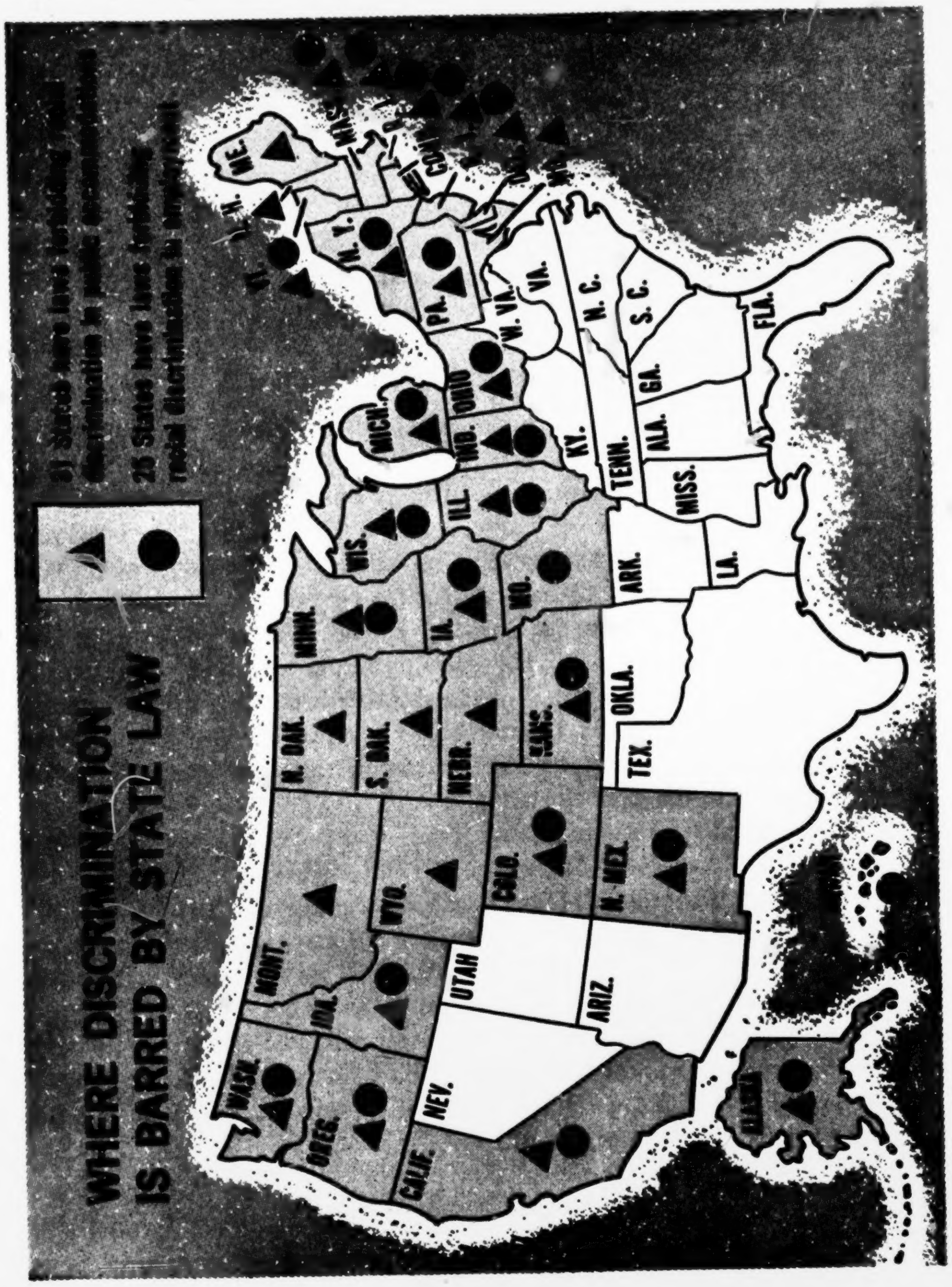
WHERE DISCRIMINATION IS BARRED BY STATE LAW
▲ 31 States have laws forbidding racial discrimination in public accommodations
● 25 States have laws forbidding racial discrimination in employment
ME.
N. H.
VT.
MASS.
R. I.
CONN.
N. Y.
N. J.
DEL.
MD.
PA.
W. VA.
VA.
N. C.
S. C.
GA.
FLA.
ALA.
MISS.
TENN.
KY.
OHIO
MICH.
IND.
ILL.
WIS.
MINN.
IA.
MO.
ARK.
LA.
N. DAK.
S. DAK.
NEBR.
KANS.
OKLA.
TEX.
MONT.
WYO.
COLO.
N. MEX.
IDA.
UTAH
ARIZ.
NEV.
WASH.
OREG.
CALIF.
ALASKA

FIGURE I

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the aggrieved individual must file his case with the appropriate law enforcement agency, where it is handled like other misdemeanors.

Although state commissions against discrimination have the power to hold public hearings, most have utilized this power very sparingly. Following the lead of the pioneer New York agency, these agencies attempt first to accomplish their aims by conciliation. This is usually successful, because of the threat of bad publicity involved in a public hearing. Thus New York's agency ordered only twenty-nine complaint cases to public hearings in the first fifteen years of its existence, and two-thirds of these were settled before they reached this stage or during the hearing itself.[14]

State Law Prohibitions and Administration

Most of the state laws are modeled on the pioneer New York law which prohibits *employers* from discriminating in any way in the employment relationship—hire, promotion, discharge conditions, or wages—because of race, color, creed, or national origin; prohibits *unions* from excluding, expelling, or in any other way discriminating on such a basis; prohibits *employers* or *employment agencies* from advertising or causing to be circulated in any way or placed in an application for employment, any such discriminatory limitations or specifications; and prohibits *employers, unions,* and *employment agencies* from discriminating in any way against a person because of that person's opposition to the type of discrimination proscribed under the law.

All the commissions—state and local—are meagerly staffed except for those of New York State and Philadelphia. Only New York has well-compensated, full-time commission members. The remainder of the state or local commissioners are part-time functionaries, or governmental personnel, who are paid a modest salary or a per diem rate and are free to devote time to other pursuits. Where the commissioners are part-time state employees, there are usually some full-time staff members who do the basic work. But, as already noted, only New York State and Philadelphia have well-paid, abundantly staffed organizations.[15]

Effectiveness of State Laws Against Discrimination

It is difficult to assay directly the effect or effectiveness of state laws against discrimination because other factors have constantly acted and reacted upon employment opportunities of minority groups. It is obvious that many Negroes and members of other minority groups have obtained jobs because of the existence of these laws. For example, soon after the passage of the New York law, banks and department stores in New York City commenced utilizing Negro tellers and clerks to a degree heretofore not done.

It is also obvious that in all of the states which have enforceable fair employment laws, discrimination because of race has not ceased. One still finds companies with sparse minority group employment; a study conducted by the author for the 1938-1943 period found substantial discrimination by railroad and building trades unions applied with very few exceptions, and twenty years later the same was true both in states having fair employment laws and in those which have not.[16]

The careful study of state fair employment practice laws by Professors Norgren and Hill credited all state agencies with improving minority group employment status, but they found that the New York law and agency were by far the most effective. Norgren and Hill point out that the New York Commission has concluded agreements with several thousand firms, where it found discrimination, to alter past practices. The New York Commission follows up these agreements by periodic studies and as a result can point to a substantial altering of past practices, including those in areas where traditionally Negroes have not been employed: banking, insurance, other white collar occupations, and supervisory positions in manufacturing. Similar, but less comprehensive, progress was found by Norgren and Hill in New Jersey and Philadelphia.[17]

A specific reason for New York's superior progress is, according to this study, the manner in which the New York Commission, on its own initiative, utilizes its superior budgetary and personnel resources to study the racial patterns of an entire industry operating in the state and then makes recommendations (backed up by possible sanctions) to alter discriminatory practices. Where such an agency does not take the lead in altering employment patterns, there is no social organization to play the role which unions have in unfair labor practice cases. A worker who believes that he has been discriminated against because of race or color may secure some assistance from a race relations organization or a legal aid group, but no such organization exists which is primarily engaged in handling such matters before fair employment practice agencies. As a result, many complainants do not follow through even if they make complaints.[18]

Unions and State Fair Employment Laws

The state fair employment commissions seem to have had less success in dealing with unions, although all unions which barred Negroes by written constitutional provisions had deleted these rules by 1964 and although hundreds of workers are now union members who would have been excluded before the passage of state fair employment practice laws. Nevertheless, and in spite of the fact that union, and particularly AFL-CIO, support was often a decisive factor in gaining state legislative approval of fair employment laws, some of the most intransigent cases brought before state fair employment commissions, and usually the first cases to go to public hearings or the courts, have involved unions.[19]

Professor Ray Marshall's careful appraisal found that by the fall of 1963, state commissions had "not changed the basic employment patterns in most unionized industries." He found local unions relatively impervious to moral pressures and cited a number of cases where court action (including in one case, fining of the local by a Connecticut court in a contempt action) was necessary, or where it took mass demonstrations by Negroes to gain union membership. He concluded that "recalcitrant local unions will change their practices when their power sources are threatened by government regulation, retaliation from the Negro community, and alienation of public opinion." But to be effective, these sanctions have to be applied directly to the unions and not to the employer when the unions are at fault.[20] It was not, for example, until the New York agency took a Sheet Metal Workers' local to court that it abolished its rule limiting apprentice candidates to relations of the all-white local's members.

The Federal Law of 1964

Despite the relative success of the state commissions, Negro employment progress after 1958 was actually less than that of whites, so that by 1962 the income differential between whites and Negroes widened. Agitation over employment problems in the North and continued facility segregation in the South resulted in the national consensus which produced the Civil Rights Act of 1964. Title VII of this act deals with equal employment opportunity and is effective as of July 2, 1965, one year after the passage of the act.

Coverage and Content

The equal employment opportunity law applies to all employers who employed 25 or more persons at least 20 weeks the preceding year but excludes the federal government (which is nonetheless directed to insure non-discriminatory employment within its own ranks); state governments or subdivisions thereof; private membership clubs (except unions); religious organizations; or the employment of aliens outside their country. Additional exemptions were granted for one year to employers having fewer than 100 employees; for two years to those having fewer than 75 employees; and for three years to those having fewer than 50 employees. Other than explicit exemptions, the act applies to employers who are defined as such by the Landrum-Griffin Act, which contains the most comprehensive such description in federal law.

The equal opportunity law also applies to employment agencies, including the United States Employment Service, state and local employment services utilizing federal funds, anyone acting to procure employees for work, and unions which maintain hiring halls or procure employees for work. Finally, the law covers unions which have 100 members or more the first year, 75 or more the second year, 50 or more the third year, and 25 or more thereafter. Unions are thus covered in the same manner as employers. Moreover, unions are defined to include local, national, and intermediate bodies.

The basic proscriptions of the law are set forth in Figure II. The coverage of the law extends to joint labor-management committees and other organizations controlling apprenticeship—thus closing a loophole found in many state fair employment laws. It permits religion, sex,[21] or national origin to be utilized where valid occupational classification calls for such a distinction (e.g., a model, a Kosher butcher, or a teacher in a girls' school or in a religious seminary); it excludes from the coverage any protection to members of the Communist Party, or of any organization "required to register as a Communist action or Communist front organization by final order of the Subversive Activities Control Board pursuant to the Subversive Activities Control Act of 1950," and it also excludes persons from its protection who have failed to gain security clearance under any federal security program insofar as access to secret or confidential governmental work is concerned. In order to avert charges of discrimination involving such ordinary employment practices as regional wage differentials, benefits and seniority, the act permits an employer to apply such different standards to employees in different locations "provided that such differences are not the result of an intention to discriminate because of race, color, religion, sex or national origin." The law also permits employers on Indian reservations to continue to give employment preferences to Indians.

Administration

The act established an Equal Employment Opportunity Commission, a five-man independent agency appointed by the President with the consent of the Senate. Like other federal agencies, this

FIGURE II

Unlawful Employment Practices Under Title VII CIVIL RIGHTS ACT OF 1964

DISCRIMINATION BECAUSE OF RACE, COLOR, RELIGION, SEX, OR NATIONAL ORIGIN

Sec. *703.* (a) It shall be an unlawful employment practice for an employer—

(1) to fail or refuse to hire or to discharge any individual, or otherwise to discriminate against any individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, sex, or national origin; or

(2) to limit, segregate, or classify his employees in any way which would deprive or tend to deprive any individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, sex, or national origin.

(b) It shall be an unlawful employment practice for an employment agency to fail or refuse to refer for employment, or otherwise to discriminate against, any individual because of his race, color, religion, sex, or national origin, or to classify or refer for employment any individual on the basis of his race, color, religion, sex, or national origin.

(c) It shall be an unlawful employment practice for a labor organization—

(1) to exclude or to expel from its membership, or otherwise to discriminate against, any individual because of his race, color, religion, sex, or national origin;

(2) to limit, segregate, or classify its membership or to classify or fail to refuse to refer for employment any individual, in any way which would deprive or tend to deprive any individual of employment opportunities, or would limit such employment opportunities or otherwise adversely affect his status as an employee or as an applicant for employment, because of such individual's race, color, religion, sex, or national origin; or

(3) to cause or attempt to cause an employer to discriminate against an individual in violation of this section.

(d) It shall be an unlawful employment practice for any employer, labor organization, or joint labor-management committee controlling apprenticeship or other training or retraining, including on-the-job training programs to discriminate against any individual because of his race, color, religion, sex, or national origin in admission to, or employment in, any program established to provide apprenticeship or other training.

* * * * *

OTHER UNLAWFUL EMPLOYMENT PRACTICES

Sec. 704. (a) It shall be an unlawful employment practice for an employer to discriminate against any of his employees or applicants for employment, for an employment agency to discriminate against any individual, or for a labor organization to discriminate against any member thereof or applicant for membership, because he has opposed any practice made an unlawful employment practice by this title, or because he has made a charge, testified, assisted, or participated in any manner in an investigation, proceeding, or hearing under this title.

(b) It shall be an unlawful employment practice for an employer, labor organization, or employment agency to print or publish or cause to be printed or published any notice or advertisement relating to employment by such an employer or membership in or any classification or referral for employment by such a labor organization, or relating to any classification or referral for employment by such an employment agency, indicating any preference, limitation, specification, or discrimination, based on race, color, religion, sex, or national origin, except that such a notice or advertisement may indicate a preference, limitation, specification, or discrimination based on religion, sex, or national origin when religion, sex, or national origin is a bona fide occupational qualification for employment.

commission is empowered to establish regional offices and to appoint staff pursuant to civil service regulations, to subpoena records, and to prescribe rules and regulations for carrying out its duties.

Following the provisions of the New York and most other state laws, the commission is required to attempt first to settle complaints by conciliation. Moreover, where there is a state law or municipal ordinance proscribing discrimination or providing for a means of relief, no action may be taken by the Equal Employment Opportunity Commission until it has notified and given the state or local agency 90 days to act; or if the state or local agency is in its first year of existence, 180 days to act. The law specifically permits state laws to exist concurrently, provided that such laws do not require or permit the doing of any act which would be an unlawful employment practice under the federal law. Moreover, the commission is urged to enter into agreements with state agencies for the utilization of the latter's services to carry out the functions of the federal law. Records are required to be kept by employers, unions and employment agencies, but if such records must be kept for state agencies or by Presidential Executive Order 10925, pursuant to government contracts, and there is no question of compliance, no additional records need be kept.

Where an alleged violation of the law is not subject to a state or local law, or such state or local agencies have not acted, and where conciliation has not succeeded, the aggrieved may file a civil action in an appropriate United States District Court. The Court may appoint an attorney free of charge to the complainant and may permit the United States Attorney General to intervene. The Court may enjoin the practice and may order reinstatement, back pay, hiring, union membership for an employee, or other remedies, provided the unlawful practice was found to be *intentional* on the part of the respondent, and provided the discrimination was not for any other reason than what is unlawful under the act. Courts may also appoint masters to determine facts. Continued non-compliance after an order permits the commission to commence proceedings to compel compliance. (See Figure III for a diagram of the procedures).

An additional section (707) permits the Attorney General to bring a civil action where he believes that any person or group of persons is engaged in a pattern or practice of resistance to the full enjoyment of any of the rights guaranteed by Title VII of the act, requesting relief, including an injunction, to overcome such resistance. The Attorney General may request the appointment of a three-judge court to hear such a case, in which case appeal is directly to the Supreme Court, thus by-passing the Court of Appeals.

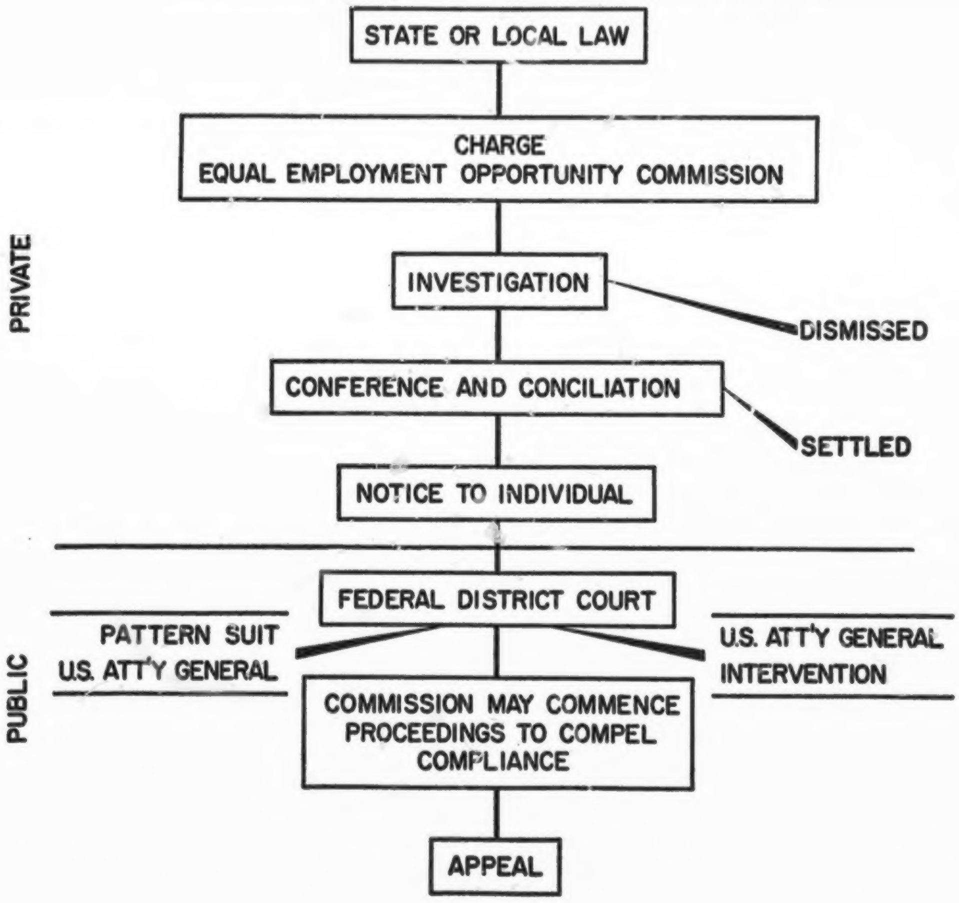
Before proceeding to court, the commission may hold a public hearing, examine witnesses, and make findings. Individuals subpoenaed or otherwise objecting to an investigation may appeal to the courts within twenty days after being served.

Analysis

How the equal opportunity law will work out in practice is of course dependent on many factors, but on the basis of the law itself, and on the experience of the state laws already in effect, certain predictions may be made with reasonable safety.

FIGURE III

Procedures, Title VII, Civil Rights Act of 1964


STATE OR LOCAL LAW
CHARGE
EQUAL EMPLOYMENT OPPORTUNITY COMMISSION
PRIVATE
INVESTIGATION
DISMISSED
CONFERENCE AND CONCILIATION
SETTLED
NOTICE TO INDIVIDUAL
FEDERAL DISTRICT COURT
PATTERN SUIT
U.S. ATT'Y GENERAL
U.S. ATT'Y GENERAL
INTERVENTION
PUBLIC
COMMISSION MAY COMMENCE PROCEEDINGS TO COMPEL COMPLIANCE
APPEAL

In the first place, the major impact may be on the South. There are two basic reasons for this. First, by leaving authority in the hands of already existing state and municipal agencies, the federal law does not alter the situation in most Northern states, except insofar as these existing agencies may be spurred into more aggressive activity by the fear of losing their jurisdiction to the federal government; or insofar as the Negro community might take advantage in a more aggressive manner of the rights under the state laws, now that the federal government is also committed to furthering equal opportunity.

In the second place, before the federal law became effective nearly every major corporation in America had already reappraised its minority group employment policies, and many were moving to implement these appraisals with effective programs to employ Negro personnel both in greater depth and throughout their organizations. This was particularly true of companies which dealt directly with consumers, but by no means excluded others. Negro boycotts and demonstrations in 1963–1964, pressure from governmental contract provisions or "Plans for Progress," and a determination to avoid problems while there was still time all played a role. By June, 1964, Negro college graduates were among the most sought-after graduates in America.[22] Negro unemployment rates declined during early 1964 at a more rapid rate than did those of white workers, including a significant drop in unemployment among Negro teenagers and expansion of Negroes in the white collar and professional jobs.[23] Most of these gains occurred in Northern industrial centers, although national corporations in many Southern centers were increasingly moving toward fair employment.

For the North, therefore, compulsory fair employment practice will not be new; for the South, it will require considerable adjustment. One may expect Southern legislatures to pass fair employment laws in order to take jurisdiction of these questions, but the federal agency can and will intervene if these laws are merely dodges.

But in neither North nor South will the equal opportunity law solve the Negro unemployment problem. The law does not qualify a man for a job. He must be able to do it. Despite recent gains, Negro unemployment remains twice that of whites. Only through training and development can this problem be rectified. Now, however, there is hope for Negroes to take training—this is undoubtedly the main gain from the new law in addition to the jobs it will insure those already qualified, for real progress will require many years.

"Wagner Act" Stage in Fair Employment Legislation?

There are two other aspects to the equal opportunity law which deserve attention. In the real sense, it marks the "Wagner Act" stage of fair employment practice legislation. For the restrictions are entirely on those who might discriminate. But consider what can happen to an employer (or union or employment agency) who has a thoroughly fair employment policy by any objective standard. The law would apparently protect that employer from picketing or boycotts by groups aimed at subverting this policy. In addition, the Equal Opportunity Commission is authorized "upon the request of an employer, whose employees or some of them refuse or threaten to refuse to cooperate in effectuating [the law] . . . to assist in such effectuation by conciliation or such other remedial action is as provided by [this act]. . . .," which would seem to include a request by a court order.

On the other hand, there is nothing in the law to protect such an employer (or union or employment agency) from picketing, boycotts, or other economic action by minority groups that are not satisfied with the policies of such employer *even though the law is satisfied.* Thus an employer can be severely damaged even though he is in compliance with the law.

This is no remote possibility. There are several national and local organizations vying for support of the Negro community. In Philadelphia, the Congress of Racial Equality ordered a boycott of a building project after the unions and contractors had made a settlement on Negro employment agreed to by the National Association for the Advancement of Colored People. In California, CORE has picketed 20 of the Bank of America's 864 branches even though the bank was the first major employer in California to sign a formal statement of racial equality with the California Fair Employment Practice Commission. CORE justified this action because the bank declined to (1) waive its high school education requirements for Negroes which the bank insists upon for all new hires; and (2) supply CORE the elaborate statistics on employees which the bank had already supplied to the California Commission.[24]

Such occurrences have been sufficiently frequent to remind one of the period when the AFL and the CIO were struggling for power with the employer caught in the middle. Will the "Wagner Act"-type Civil Rights Act of 1964 be followed by a "Taft-Hartley Act"-type some years hence, containing restrictions on minority group activity as well as protecting minority group rights? And later, will there follow a "Landrum-Griffin Act"-type also protecting individuals within minority group organizations?

Relation to Other Laws

As we have noted, the equal opportunity law drafters were very careful to consider the effect of the new law on similar state and local enactments. But there is no mention of Taft-Hartley, Landrum-Griffin, or other federal statutes. For example, a union may be charged with an unlawful employment practice by the Equal Opportunity Commission for discrimination against Negroes at the same time it is being certified as the bargaining agent for these same discriminated-against employees by the National Labor Relations Board. The equal opportunity law also sheds no light on whether picketing or boycotts by racial groups are "labor disputes" within the Norris-La Guardia Act, a decision which judges will have to make before deciding whether such demonstrations can be enjoined. Similarly no attempt was made to be certain that the new civil rights law conforms with the recently-enacted equal pay law, discussed later in this article with the prohibitions on sex discrimination. Thus, our federal labor legislation continues to grow without reference to its impact on existing federal law or to the complexities in which labor and management find themselves when caught in the cross-fire between two laws or agencies.

Effect on State Employment Services

All states maintain employment offices and related services which are heavily subsidized by the federal government. These offices, like private ones, make little attempt to alter the preferences of their "customers." Federal funds are allocated on the basis of number of placements. Hence state agencies are anxious to make placement, rather than to risk alienating an employer.

In the South, these state agencies are either directly segregated, or located by neighborhood and therefore "de facto" segregated. Over 90 per cent of their nonwhite placements are likely to be in service or unskilled work, whereas nearly that percentage of white placements are in higher categories.[25] It is obvious that the new Equal Opportunity Commission can commence its policing of employment agencies by starting with those which utilize federal funds.

DISCRIMINATION BECAUSE OF SEX

The year 1964 was a banner one for the feminists. In June, the "equal pay for equal work" law, enacted in 1963, became effective.[26] And then, just a few weeks later, Congress passed the equal opportunity law which forbade discrimination by sex, as well as by race, color, creed, or national origin. This law, as noted, is effective as of mid-1965.

Equal Pay for Equal Work

The equal pay law was enacted as an amendment to the Fair Labor Standards Act. Therefore its coverage is identical with that of the federal minimum wage law, and it is administered by the Wage-Hour and Public Contracts Division of the United States Department of Labor. For one year, the Division announced it would advise employers about compliance without penalties; thereafter enforcement will be the same as under minimum wage legislation.

The equal pay law in brief provides that it is illegal to pay women (or conversely, men) less than men (women) for doing the same work, and it is unlawful for a union or its agents to cause or attempt to cause an employer to discriminate in wages on the basis of sex. Furthermore, existing differentials can not be eliminated by a wage reduction. The act contains a general exception for differentials based on any factor other than sex. In addition, three specific exemptions—wage differentials based on merit, seniority, and piece-rates or incentives—are specifically permitted.

It may take years of litigation to determine what is or is not equal pay. For example, if the employment of women requires additional material-handling personnel in order to move heavy parts, obviously women are not doing the same work as men who could move the material as well as do the work being done by women. But there are many gray areas which are not so obvious. The best protection for both employers and union is to have a well thought-out formalized wage structure based on job evaluation so that rates are as objectively established as possible. The application of such a program can eliminate any vestiges of wage differentials, and, perhaps more important, preclude charges that they exist. The fringe areas may also cause trouble, but because this area is closely involved in discrimination because of sex, we shall discuss it in the section below which deals with that topic.

State Equal Pay Laws

In addition to the federal law, equal pay laws exist in twenty-four states.[27] The earliest laws were enacted by Michigan and Montana in 1919; the latest, by Missouri and Vermont in 1963. These laws vary in coverage and content and do not seem to have generated either much litigation or any substantial changes in industry's pay practices. Testimony of federal government and union officials maintained that this proved that a federal law was needed.[28] Little evidence was produced before congressional committees that wide wage discrimination against women actually exists, although there is no doubt that women are subject to job discrimination. It is for this reason that the equal opportunity law may have a far greater effect on the earnings of women than will the equal pay bill. For the latter is silent on job opportunities—it merely requires equal pay whenever women do equal work.

Impact of the Two Laws

The equal opportunity law's provision against discrimination because of sex could well have a major impact on industry, unions, and employment agencies. For example, must industry open up its secretarial jobs to men? Can an air line refuse automatically the application of a qualified aviatrix for a pilot's job? Will the help-wanted advertisements no longer be able to be divided into male and female? Will women be regularly students in executive-development seminars? One could go on, adding numerous other questions concerning the manner in which industry has developed a sex-occupational division of employment over the years and the potential for change therein as a result of the equal opportunity law.

To be sure, the role of women in the labor market has been fluid. But adherence to the patterns of the past will be no guarantee that illegal discrimination will not result. The so-called "Negro revolution" of the early 1960's could result also in a vast expansion of employment opportunities for women—and perhaps even the return of the male secretary, now almost extinct.

There are a whole host of practices in the fringe area and in state laws which raise some very serious questions of conflict with the new equal opportunity laws. For example, if retirement for women is required at 62 but of men at 65, is this sex discrimination? Frequently in health and welfare plans, dependent coverage is included for men but not for women. This would appear to be an obvious discrimination and also raises questions of equal pay for equal work. Some companies have rules that pregnant women must resign or that married women can no longer work. Is this discrimination? For example, must the air lines retain married stewardesses?

In the realm of state legislation there appear to be many conflicts with the new federal equal opportunity law. State laws which require that women cannot work beyond a certain time obviously discriminate against women. Minimum wage laws exclusively for women, maximum hours laws exclusively for women, and laws requiring the layoff of pregnant women at a certain time also discriminate against women. Are they in conflict with the new law and therefore unconstitutional under the preemption doctrine? These are just a few of the many questions which this law raises and which must be adjudicated.

DISCRIMINATION BECAUSE OF AGE

One more type of discrimination is forbidden by law—that because of age. Ten states[29] and Puerto Rico outlaw such discrimination in their fair employment practice legislation, and eight others[30] have separate laws dealing with this subject. Although these laws really represent a statement of public concern rather than much more, there have been cases arising under them. For example, in Wisconsin, a recent case found an employer guilty of age discrimination by reason of his forcing certain employees to retire before the regular retirement age. Some state laws, for example that of Pennsylvania, exempt actions made pursuant to provisions of pension plans approved by the U. S. Internal Revenue Service. But there is a fundamental conflict between the early retirement proponents and those opposing any discrimination because of age. The matter may arise at the federal level. For although the equal opportunity law now does not proscribe age discrimination, it provides for a study by the Secretary of Labor with a report to Congress by June 30, 1965. One may well expect the report to suggest outlawing such discrimination also.

CONCLUDING REMARKS

A great new area of federal regulation will commence when the equal opportunity section becomes effective in 1965. Unlike the analagous case of the Wagner Act in 1935, large employers are not fighting the law. Rather they are moving to comply with it before it becomes effective. Likewise employer organizations—the National Association of Manufacturers, the Chamber of Commerce of the United States, their affiliates and other employer groups—are offering constructive advice and seminars on the law, what it means and how it works, in fact and in spirit, within its confines and requirements.

Similarly, the leaders of labor unions are urging their members and affiliates to obey the law and to open up doors to Negroes and other minorities where equal treatment does not exist. One hears no rancor such as that which greeted both the Taft-Hartley and Landrum-Griffin Acts.

To be sure, there are those in industry and labor who are opposing fair employment in fact and/or in spirit. Some do so for fear of losing customers or electorates. But those are a small and probably dwindling minority.

In a real sense, therefore, the equal opportunity law is being received with more favor by those whom it would regulate than any other labor legislation in our history. How the law will work out will depend to a large extent upon those who administer it and upon those whom it would protect. Will the new bureaucracy which this law is bound to create attempt, like all its bureaucratic predecessors, constantly to expand the intent of Congress and therefore the scope of its work? Will minorities understand that equal opportunity means just that and no favored treatment or privilege without qualifications? How these two questions are answered will determine whether the favorable climate in which the law was inaugurated can endure.

FOOTNOTES

1. Problems of this period are discussed in Herbert R. Northrup, *Organized Labor and the Negro* (New York: Harper Bros., 1944) and Robert C. Weaver, *Negro Labor — A National Problem* (New York: Harcourt, Brace & Co., 1946).
2. For cases in point, see Richard C. Wilcock and Walter A. Franke, *Unwanted Workers* (New York: Free Press of Glencoe, Inc., 1963). Recent studies in South Bend, Indiana, following the 1963 closing of the Studebaker plant, again demonstrated the difficulties which Negroes have had in gaining employment.
3. *Manpower Report of the President,* 1964, p. 80.
4. *Ibid.,* p. 96.
5. See e.g., Daniel Creamer, *Changing Location of Manufacturing Employment, Part I: Changes by Type of Location, 1947-1961* (New York: National Industrial Conference Board, 1963), Studies in Business Economics, No. 83.
6. Weaver, *op. cit.,* Chapters II-IV.
7. Northrup, *op. cit.,* Chapters III and X.
8. The ban on closed shop, as written in the Taft-Hartley Act and as modified in the Landrum-Griffin Act, has never been effectively enforced in the construction industry.
9. See Paul H. Norgren and Samuel E. Hill, *Toward Fair Employment* (New York: Columbia University Press, 1964), p. 159.
10. Based on field interviews.
11. Norgren and Hill, *op. cit.,* pp. 171-175.
12. These states are in the chronological order of their enactment: New York and New Jersey (1945), Massachusetts (1946), Connecticut (1947), New Mexico, Oregon, Rhode Island, and Washington (1949), Alaska (1953), Michigan, Minnesota, and Pennsylvania (1955), Colorado and Wisconsin (1957), California and Ohio (1959), Delaware (1960), Idaho, Illinois, Kansas, and Missouri (1961), Indiana, Iowa, and Vermont (1963). However, Colorado, Wisconsin, Kansas, and Indiana had voluntary laws for several years before making them enforceable. In addition, Arizona, Nebraska, and Nevada enacted laws in 1961 prohibiting discrimination by firms supplying their state governments.
13. Norgren and Hill, *op. cit.,* p. 94, note 3.
14. *Ibid.,* pp. 106-107.
15. *Ibid.,* pp. 96-104.
16. Northrup, *op. cit.,* Chapters II and III.
17. Norgren and Hill, *loc. cit.*
18. Norgren and Hill buttress their arguments in favor of the New York state law by citing census data which show much greater improvement for Negroes in New York than in comparable states. But the validity of this is subject to limitations because of various industry mixes, migration, and other factors. Nevertheless their conclusion that New York has the most effective law seems correct.

19. This section is based upon the work of Professor Ray Marshall, whose recently published book, *The Negro and Organized Labor* (New York: John Wiley & Sons, Inc., 1965), is the most complete on the subject of Negro-union relations.
20. See the testimony of Dr. Marshall in *Nation's Manpower Revolution: Hearings before the Subcommittee on Employment and Manpower of the Committee on Labor and Public Welfare.* U. S. Senate, 84th Congress, 1st Session, 1963, Part 4, pp. 1192-1210.
21. The question of discrimination by sex is discussed later in this article.
22. See *New York Times,* June 7, 1964.
23. *Monthly Report on the Labor Force,* April, 1964, p. 7.
24. *Business Week,* June 13, 1964.
25. Norgren and Hill, *op. cit.,* pp. 35-39.
26. Labor agreements have up to an extra year to conform to the law.
27. Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Hawaii, Illinois, Maine, Massachusetts, Michigan, Missouri, Montana, New Hampshire, New Jersey, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Vermont, Washington, Wisconsin, and Wyoming.
28. See, e.g., U.S. Women's Bureau, *Economic Indicators Relating to Equal Pay,* pamphlet 9, 1963, for a summary of the evidence which does exist.
29. Connecticut, Delaware, Hawaii, Massachusetts, New Jersey, New York, Oregon, Pennsylvania, Washington, and Wisconsin; and Puerto Rico.
30. Alaska, California, Colorado, Louisiana, Massachusetts, Nebraska, Ohio, and Rhode Island.

PART III

Equal Opportunity at the Company Level

5

A VOLUNTARY APPROACH TO EQUAL OPPORTUNITY

Harry C. Baker*

Many of the problems of the underprivileged among minority groups are varied, frustratingly complex and, at least in appearance, insoluble: employment, housing, education, welfare, public accommodations – to name only a few. Because they are problems of people, their consideration and resolution are inhibited by the strong emotional climate which surrounds them.

A few general observations about the solution of these economic and social problems are made before some views on the topic "A Voluntary Approach to Equal Opportunity" are discussed. There appears to be general agreement that there is an inter-relationship between most of these socio-economic problems and, as a result, many of us are inclined to seek one common denominator – a sort of "pat answer" which, when properly implemented, will result in substantial improvement on all fronts simultaneously. We should resist the temptation to seek one solution for all of these problems for the best of all possible reasons: it does not work. After making that flat declaration, I will be the first to subscribe to such an easy approach and limit my remarks to equal employment opportunity in industry.

It is difficult for either the average layman or the professional practitioner in the field of personnel administration to study this question without interjecting personal views. But we can draw one conclusion, and it is an objective one: the established polls show that minority group leaders are almost unanimously maintaining that, out of the total area in which minority groups seek rights and opportunities, the least real progress has been made in the area of highest priority – employment and jobs.

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Where Negroes are turned down for jobs, how much is due to outright discrimination, and how much takes place because of a genuine lack of qualification? Of course, one would expect a wide variation of opinion on this among the so-called extremists on both sides and among the least informed groups. More significant, therefore, is the disparity of views of the more responsible company executives and Negro leaders.

According to a survey of a leading firm, only 7 per cent of company executives believed that Negroes were turned down for jobs because of prejudice. Twenty-four per cent thought the turndown was due to a combination of prejudice and lack of qualification. On the other hand, 54 per cent of the Negro leaders attributed the turndowns to prejudice alone and 43 per cent to a combination of prejudice and lack of qualification. In other words, 97 per cent of the Negro leaders, but only 31 per cent of the company executives, see prejudice as a significant factor in job opportunity. With such divergent views, there is small wonder that a solution to some of these problems is so long in coming.

In discussing this subject, there is an attractive temptation to chart the most neutral or popular course. This is true even though responsible management people believe in equal employment opportunity. If we in good conscience believe this, what are the issues or problems?

The real questions to be considered are:

1. How much unfair job discrimination exists against minority groups?
2. If inadequate education and training are restricting job opportunities for minority groups, what role, if any, should employers play in solving this problem?

A DIVERSITY OF VIEWS

Let us examine what some employers and others are saying toward these points.

One executive states: "It is just good citizenship and good business management for those of us in free enterprise to help furnish leadership in integration of minority groups into the employment rolls."

A second executive says: "We have hired several Negroes at the executive level — engineers, chemists, etc. But we refuse to be stampeded into mass hirings. We are eager and happy to have

Negroes on our staff, but we insist on maintaining our high standards in personnel."

A spokesman for another company says: "We're working on the problem very hard and are doing something about it. One thing we do not intend to do is to hire Negroes just to sit near the door so that they can be pointed out to visitors to show how liberal we are."

The president of another corporation believes that serious, prolonged civil rights tension as a part of the effort of the Negro to achieve his constitutional equality is unnecessary and threatens the economic welfare of this country.

A former secretary of labor once urged management to try to give jobs to Negroes who would not entirely qualify under present hiring standards. In this regard, he stated that it is not unthinkable that an employer should say: "If you have the aptitude but lack the skills, we'll train you."

It also has been suggested that it is important to avoid job discrimination because of color among the *lesser* qualified, on the basis that industry hires and upgrades many white people whose education and skills are marginal. The point is well-taken: equal treatment for the lesser-skilled Negroes is as much an obligation as for the semi-skilled or professional members.

It can be seen from these diverse opinions that the issue comes into its sharpest perspective. During the course of this paper, it is my intention to outline my views regarding some of the points raised in these observations.

EQUAL EMPLOYMENT OPPORTUNITY AT INTERNATIONAL HARVESTER COMPANY

Turning now to the things I know best in the realm of equal job opportunity, I would like to discuss non-discrimination and voluntary equal employment opportunity at the International Harvester Company. In doing so, it is certainly not my intention to try to glorify our way of doing things or to ennoble our treatment of these problems, but rather to limit my comments to those aspects of this subject with which I am most familiar.

One additional prefatory comment should be added relative to a voluntary approach to equal job opportunity. Except by degree and method, those things that we formerly did on a purely voluntary basis are substantially the same as we are required to do under the various laws, executive orders, and rulings. It may be that we are now spending a little more time assuring people outside the company that we are doing what we are doing. On the other hand, the very fact that we are called upon to furnish statistics and related information means that we, in turn, require more information from our operations; this may, therefore, suggest to them that we are now "policing" more closely their behavior in the area of non-discrimination. Thus, it may have the salutary effect of making them more conscious of their obligations.

First, a little about our early history in this area, and more importantly, about our current views, activities, and experiences under the several executive orders and our own pledges made as a Plans for Progress Company.

A Look At the Past

Our company has believed in voluntary non-discrimination and has worked toward that end for many years. Non-discrimination was formally enunciated by top executives as a fundamental policy more than forty years ago and was communicated to all managerial employees. More than twenty years ago the practice of publicizing this policy in writing came into general use. Since then it has been declared in union contracts, in employee handbooks, in advertising directed to communities where the company has established new factories, and in other media. In fact, it has been our historical practice to make a thorough investigation of the social mores of the business firms in cities where we are starting new operations, to discuss with community leaders our basic policy of equal employment opportunity, and to interview the appropriate business and civic leaders so that we can acquaint them with our policies and practices.

Since 1948 company policy has been stated as follows: "there shall be no discrimination against any person because of nationality, race, sex, political or religious affiliation, or membership in any labor or other lawful organization."

Although International Harvester was unquestionably among the early leaders in this area, its activities during the early years did not eliminate or, in some areas, even significantly reduce discriminatory employment practices. For example, it was not until a few years ago that the last vestiges of segregated facilities were removed from the last of several Southern facilities. Also there are a few operations where, while Negroes are employed in substantial numbers, yet, somewhat inexplicably, they are not employed in certain work areas or departments. More importantly, their absence cannot be easily explained away solely by something such as the obvious lack of qualified candidates.

Why do some of these practices continue to exist? For one thing, the company's policies are administered by people whose attitudes and emotions are pre-conditioned by environment, cultural background, and education. Also, the implementation of company policy in any area, certainly this one, is especially difficult where the communication of top policy must be disseminated to thousands of management people who represent us at the employee and community level. Has there been some discrimination at International Harvester under some of these policies? I am sure there has been — some due to pressures and influences of internal matters, some because of human failings, and others by external forces beyond our control. While we know that the overwhelming majority of our employees agree with the approach to this problem, there are always small pockets of resistance in any company concerning any program — particularly any change from the "status quo." Nevertheless, in the final analysis, the employer must provide the momentum for the elimination of discriminatory practices. It is a responsibility which cannot be delegated. Neither can it be conditioned upon its popular appeal.

Staff people charged with the administration of this policy will invariably find employees who will subscribe to the theory, admit the equity of the principle — but who then proceed to find one or more reasons why "here and now" in *their* operation, it cannot be put into practice. But if the initiative is taken, if the power of persuasion that is the tool of most corporate staff departments is discreetly exercised, it is amazing how easily the policy can be adhered to and the practice adopted — and without upsetting all the straw men that are supposed to tumble.

These temporary delays and obstacles should be looked upon as just that and nothing more. They should never be allowed to act as a justifiable excuse for failure to act. Even though company policy and its implementation did not eliminate all incidents of racial bias, fortunately, there have been some important successes — some under severe test conditions.

For example, several years ago at one of the company's major Southern plants a Negro was promoted to a welder's job in keeping with our policy of promoting the senior qualified employee. His promotion touched off a strike, involving approximately 200 employees. In the face of strong open resistance to this move by so-called white supremacy groups, the company's position was reviewed at the executive level at the commencement of the strike. An official public position was publicly stated by the president of the company that we would do no less than affirmatively support a policy which we had undertaken and supported for many years. Although the strike continued for four or five days, its strength was dissipated following the company's firm public stand and international union support. Since then similar promotions have occurred without important incidents.

A move to desegregate locker and rest room facilities at one of the Southern plants also created a temporary problem – a test of sincerity. With company approval, a group of Negro employees moved – collectively – into a locker room previously used by all-white skilled-trades employees. There were minor, temporary disturbances, and threats of more difficulty, but plant protection people were placed immediately in the area to enforce non-segregation in those areas. Closer supervision by operating foremen and industrial relations people also was arranged, and a letter that went to all employees' homes from the plant manager clearly spelled out company policy. After these steps were taken, the organized resistance disappeared.

Whether such actions constituted a violation of local law requiring separate facilities in "public places" was not tested, even though it was understood that a building permit would not have been issued for the construction of our facilities unless provisions were made for the separate facilities.

The Present Situation

We turn now to the more current activities and experiences of the last several years. No particular purpose would be served in treating separately those things that are done as a requirement under Executive Orders 10925 and 11114, as a Plans for Progress Company, and under the basic company policy of non-discrimination, because activities of the company with a policy of non-discrimination over the years and as a Plans for Progress Company encompass and frequently exceed obligations under these executive orders.

The company became a Plans for Progress Company on February 2, 1962, with the signing of a joint statement of undertakings by President Johnson, then Vice-President and executive head of the President's Committee on Equal Employment Opportunity, and the president of International Harvester Company.

The pledges undertaken by the company were reproduced in pamphlet form and were distributed along with other appropriate literature to all management employees immediately following the signing of the joint statement with the President's Committee.

Major Elements of the "Voluntary Program"

What does the "voluntary program" actually entail? Time will not permit a full account of all of its details, but a few excerpts will serve to illustrate its scope:

> ***In the area of recruitment***
>
> In developing its sources of applicants, International Harvester is continuing to re-emphasize its non-discriminatory recruitment and hiring policy among state employment offices, college placement offices and the offices of principals and guidance counselors in secondary schools as well as among community-group representatives who are directly in a position to help the company continue achieving its objective of equality in employment opportunity.
>
> ***In employment, placement and upgrading***
>
> The company is continuing to examine regularly its practices in connection with employment, promotions, layoffs, recalls, and terminations to assure that the non-discrimination policy is being applied and is regularly examining and refining its central personnel records to improve the guidance they may give in the avoidance of discrimination.
>
> ***Of a More General Nature***
>
> The company is continuing to cooperate with agencies devoted to the improvement of intergroup relations within the communities where it operates and is continuing to participate in "Career Day" type programs in connection with any schools which serve as a company recruitment source.

Although policy affirmation at the executive level followed by appropriate communication of the policy to all employees is an important and necessary first step, some specific examples of how the company has attempted to implement it are presented below:

1. Implementing our policy to work with schools and agencies in any manner that will contribute toward improved skills of minority groups and to communicate job opportunities, some of our people have visited with classes of students at Negro high schools and colleges and have informed them of job opportunities in the company and the kinds of skills and training needed to prepare for such jobs.
2. In college recruiting efforts, special letters have been sent to all placement directors at the universities where we recruit, notifying them of the company's policies and that we do, in fact, solicit referrals of qualified minority students. Re-

cruiting has been expanded to eleven Negro colleges this year. In addition, recruitment brochures and related material, including posters announcing recruiting dates, all prominently display the "Equal Opportunity Employer" statement.

3. We continue to carry on re-examination of our present employee inventory to audit previous evaluations of experience, skills, and potential.
4. We are currently re-emphasizing our program of placing qualified employees in the general salaried area as well as providing the opportunity for more minority employees in our management organization including the entry into management jobs.
5. We are encouraging company operations to examine more carefully the manner in which employment receptionists and interviewers fulfill their roles, recognizing that an overwhelming percentage of job applicants are seen solely by these company people.
   While we have conducted training sessions with management groups including industrial relations managers, we have found that at times policy has not been communicated or explained fully to the employees assigned to these particularly key positions, who are the front line representatives of the company with the public. It is these people, rather than the industrial relations managers, who deal with 95 per cent of our job applicants and project its corporate image.
6. In support of the belief that the ultimate resolution of the complex problems of minority groups will be solved, at least in part, by the kind of relationships established between industry, the community, and responsible Negro leadership, we have been placing greater emphasis within our management organization on the need for a vital, continuing participation in a variety of community activities by responsible community organizations designed to further equal job opportunity.

Unfortunately, it is not possible to describe all of the many activities carried on by the company to implement policy, but the foregoing indicates the general program.

The Underlying Philosophy

Some of the basic policies and practices regarding non-discrimination in hiring and promotion have been outlined, and a few of the problems and accomplishments have been described. The company's interest in this subject can be viewed in fuller perspective after examining motives behind the program. What is the underlying philosophy in this program? Why, for example, does the company have the policy it professes, do the things described, as well as some other things it still hopes to do?

First, to dispel any possible preconceived notions anyone may have, it should be stated that we do not regard ourselves as "social crusaders"; nor do we consider ourselves as "liberal visionaries" in personnel management. The company believes in equal employment opportunity on the basis of merit, because it is convinced that this serves *our* best interest as well as that of the *country*. We are an economic entity, one thread in the vast American economic fabric. We believe that the country can prosper best when all members of society are permitted full participation; that is, the opportunity to make the best possible livelihood without regard to race, color, or creed. We believe this as a matter of conscience and moral principle. The American economic system cannot thrive and prosper unless all segments of the population have an opportunity to contribute their skills and talents.

That is, admittedly, a simple, economic motive. We say that we ought to have the greatest productive employment of the greatest possible number of Americans, because the contributions of all citizens to the economy are necessary if the company — and the country — are to prosper. This is a "self-interest" motive, of course, and we are not embarrassed to say so, but it is also a valid and compelling reason, one in harmony with the democratic principles of our country, as well as in the best Judaeo-Christian tradition.

There is another underlying factor which influences the company thinking in this field. Any corporation, once it has become successful and assumes a certain size, takes on a certain social character in the community. Because of the economic impact it makes, it cannot be operated solely in the interests of the stockholders, customers, and employees. Rather, its policies and actions — its behavior — influence the economic and social climate of the community in which it operates and upon which it depends for its prosperity. Thus, it ought to conduct itself in such a way as to deserve the respect and confidence of all the community's citizens.

Industry's success in promoting equal job opportunities, on a voluntary basis, with the consequent increased earning levels generated among minority groups, is one of the most important contributions that can be made toward the solution of many of the other economic, as well as social and cultural, challenges involving minority groups. Equal employment opportunity in its fullest sense (including hiring, upgrading, training, and promotion), indeed can be the catalyst that sparks the elimination of other problems, such as those in housing and education, that prevail among minority groups.

The company policy is one of *non*-discrimination, which is another way of saying that it is not one of favoritism — to any group. We would not, for example, hire or upgrade a Negro because he is a Negro any more than we would discriminate against him for the same reason. It would be a disservice to the company and to the economy to employ any "double-standard" in our hiring and promotion policy. To do so would be to short-change the company's stockholders who expect us to hire the most qualified persons.

Although we have no intention of extending preferential treatment in the employment office, we do make a special effort to recruit and otherwise search out qualified minority applicants. However, having made this special effort, at the point of hiring we will employ applicants on the basis of qualifications alone, without regard to race, creed, or color.

CONCLUDING REMARKS

Finally, attention is called to the fact that a program for nondiscrimination in industry is the kind of subject which, by its very nature, taxes the initiative, the ingenuity, and — perhaps most of all — the patience of those who are most interested in making it work.

It is hampered with special problems because of the volatile emotions encountered on all sides. It is complicated by the sense of urgency it produces in the minds of some people *who believe they are being arbitrarily deprived of their right — or,* by the people who feel they are being pushed too hard and too fast. So it becomes increasingly more important that we do not lose sight of our objective, but press forward with continuing dedication, according to the moral and legal responsibilities as we see them, *without regard to the outside diverting influences going on around us.*

The competent and skilled personnel management man is a realist who knows how to distinguish fact from fiction when it comes to picking out human capabilities and observing human behavior. It is his heavy responsibility to know what factors are relevant to the quality of an employee's performance. It is not likely that he will regard the color of a person's skin as anything but irrelevant when he looks for those factors.

This is not a challenge facing only those specialists in personnel. It is an exciting one in which all management people can — and ought to — participate. No one in industry can insulate himself from this vexing problem; it is too urgent, too pervasive, and too far-reaching to leave to the personnel office. It is the kind of problem that calls for the sympathetic interest and the active participation of all management people if the American people are to have the kind of successful, progressive industrial management they have a right to expect.

6

EQUAL EMPLOYMENT OPPORTUNITY AT HONEYWELL, INC.

Gerry E. Morse*

Today industry is faced with a very serious challenge – the challenge of providing equal employment opportunity for all citizens regardless of race, color, creed, or national origin. If industry fails to meet this responsibility through voluntary planning and aggressive implementation, attempts at solutions which may not be sound either economically or socially may very well be forced upon us.

Civil rights is a problem that has plagued our country for generations – one for which there are no easy or quick solutions. It is a problem that has deep roots and touches all phases of our society – including industry. In fact, underlying all the action for more equality of opportunity in education, housing, and voting, is the desire to secure equality of opportunity in employment. The chance to make a good living is of paramount importance to any lasting correction for the disadvantaged. As business leaders we cannot turn away from our direct involvement in this problem. It is our responsibility to help find a solution because at the present it has, and in the future it will continue to have, a very real and direct impact upon our economy and upon the fortunes of our individual enterprises. This problem will not go away if we disregard it; in fact, if neglected, it will undoubtedly grow worse.

At Honeywell we are convinced that the United States must find sound ways to make full and effective use of the productive capability of each individual in the work force, no matter what his race, color, creed, or nationality. If an individual is qualified – and let me repeat, qualified – he must be assured an equal opportunity to obtain and hold a job commensurate with his performance. If he is not qualified, but has the potential to become qualified, he must be assured an equal opportunity to get the education or training that will permit him to qualify himself. Our country cannot afford to waste its manpower talents and resources. In the world competition in which we are increasingly engaged, our very existence and that of our free enterprise system depend upon our ability to maintain economic progress and growth. Our chances for success are increased in proportion as we can locate, develop, and use the talents of all our people most effectively. Honeywell management believes free men, freely given the opportunity to develop and use their talents as they themselves think best, will out-do those working under any other system.

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*Vice-President, Employee Relations, Honeywell, Inc.

Honeywell is the world's largest producer of automatic controls, with a very technical and diverse product line. It includes temperature controls for heating and air conditioning; high speed computers and electronic data processing equipment for business, scientific, and government use; guidance systems and components for missiles and space vehicles; indicating, recording and controlling instruments and systems for industry; and many others. Such highly technical products require large number of scientists, engineers, and other technically trained employees. At Honeywell about one out of every ten of almost 50,000 employees is a scientist or an engineer. A great amount of effort goes into research and advanced engineering development. The shortage of qualified employees for such work continues to be a problem for the company. Furthermore, the shortage of qualified minority group individuals – Negroes in particular – in these fields is even more serious. Not enough of them who have the potential for it have received technical educations. Worse still, for many of those who have, the level of education and training has been very inadequate. Certainly, many have been interviewed for whom the level has not been up to the standard provided by the major accredited engineering schools, and definitely not up to the level required for them to have any chance for success in the work we have to do.

On the other hand, the need for well-educated and capable employees to fill expanding work requirements over the years resulted long ago in a non-discriminatory employment practice at Honeywell and a willingness on the part of managers and supervisors to employ qualified applicants without discrimination because of race, color, creed, or nationality. Over the years the company felt that non-discriminatory employment practices did work and that it was providing Negroes and members of other minority groups with equal employment opportunity. However, the record has proven that the company was wrong.

A PLAN FOR PROGRESS AT HONEYWELL

Honeywell signed a Plan for Progress with the President's Committee on Equal Employment Opportunity on February 7, 1962. As a result of the incentive that that gave us to seek out qualified minority group applicants, the company has made more progress in finding, hiring, and promoting qualified minority group individuals after signing that plan two and one-half years ago than it had in all the previous period of seventy-five years, and under all the compulsions of the various city and state fair employment practice laws. Many of the 268 other companies – totalling over eight million employees – that have signed a Plan for Progress have had a similar awakening.

It should be emphasized that this progress was made without changing or lowering our employment requirements or standards and without establishing any ratios or quotas for determining how many minority group employees the company should have. In order to continue to succeed and to grow in the highly competitive electronics, instrumentation, and computer fields, the company cannot compromise on qualifications; it must continue to maintain high employment and promotional standards. Our Plan for Progress experience has shown that equal opportunities for all applicants and employees nevertheless can be provided.

To understand this, let us look more closely at the Plan for Progress. First, the program provides a voluntary approach to non-discriminatory employment. The chances for better understanding, cooperation, and a friendly, objective attitude towards overcoming the inevitable problems of the employment relationship are more likely in an atmosphere of voluntarism than in one of compulsion and reluctance. The results at Honeywell, as well as at other companies, indicate that there has in fact been considerable progress in minority employment and in minority employee relationships as a direct result of Plan for Progress commitments. Second, voluntary action seems to obtain better results than legislation or government compulsion. The Plan for Progress is a voluntary, yet firm, commitment by companies to take positive and aggressive steps to insure equal employment opportunity for members of minority groups. The key to its success seems to be change of emphasis. It changed Honeywell from a passive attitude toward non-discrimination, that is one which emphasized avoiding discrimination, to an active seeking out and hiring of qualified minority group applicants. It created a similar change in the evaluation of minority group employees for possible training, development, and advancement.

The company's attitude now is a positive one for equal opportunity. Even though the Civil Rights Bill is now law, it, like all such laws, emphasizes passive avoidance of discrimination, so the company is convinced that it can and will continue to make its best progress through a positive, active Plan for Progress approach.

Implementation of the Program

Now let us take a look at some of the specific actions that are being taken to implement the program at Honeywell. We have found that the success of this, as of most programs, depends first on the attitude and actions of the top corporate executives and the general manager at each Honeywell location. Positive attitudes openly expressed and positive actions taken by these executives and managers set the stage. Without this a program of passive nondiscrimination would have probably continued. With this the company created and is maintaining an active positive program of equal employment opportunity.

Next, specific commitments were made. The introduction to the Plan for Progress between Honeywell and the President's Committee on Equal Employment Opportunity, signed by then Vice-President Johnson and the author, reads as follows:

> "It is in the interests of the United States and its business community that the talents of all persons be utilized to their fullest extent. Both the national welfare and sound business practice require this. It is, therefore, the national policy and the policy of Honeywell Inc. that all employees be recruited, hired, trained, assigned, and promoted without discrimination because of race, color, creed, or national origin."

It goes on to say:

> "The Committee and the Company both recognize that full use of this equal employment opportunity by minority groups will not be achieved immediately. However, Honeywell will affirmatively carry out this Plan for Progress to reach this goal. It is also recognized that an increase in employment of minority groups can only be achieved where there exists properly trained and qualified applicants for those openings for employment available within the Company."

The Plan then sets forth a detailed plan for affirmative action. To the company these commitments are just as much a part of running a business as sales or production commitments.

As the next step, these commitments were communicated to all managers, supervisors, foremen, and employees. The initial announcement came directly from Honeywell's president. Each location was told of its own responsibility to live up to these commitments in its own employment activities, utilization of facilities, and application of all personnel policies and practices. The locations have responded well. Their approaches have been varied and tailored to suit each plant's individual problems. In order to implement the program, each location works with a variety of agencies, such as private employment agencies, state employment offices, the Urban League, the President's Committee on Equal Employment Opportunity, and special local community committees.

A few examples of local plant and office action may illustrate the interest and initiative that has been generated as a result of directly involving all units of the company.

– At one location the personnel department worked closely with the local Urban League to produce a booklet entitled "Plan and Prepare." This booklet presents a concise but complete review of opportunities available to Negroes in industry. It points out the importance of education. It emphasizes the importance of high school and vocational education as well as that of college. This booklet, published by the Urban League, has received nation-wide distribution.

– A location in the South was interested in making Negro educators more aware of the extreme demands of technical jobs. They did so by providing summer employment to members of the faculty of an all-Negro university. The experience provided them with a better first-hand understanding of requirements, and it is hoped that this will result in an improvement of their curriculum so that their graduates will be able to meet the increasing technical demands of industry.

– At another of our Southern plants, the personnel director is the career counselor at a Negro high school. In this capacity, he provides vocational counsel and guidance to seniors and graduates.

– A Midwest location with about 400 production employees had only one Negro employee. He was a professional accountant. The location had been doing little or no hiring. In fact, there had been a slow general reduction in the work force over a four-year period. When an upturn in business came about a year ago, Negro employees were added to the production work force for the first time. Today over 40 Negroes are employed out of a total of 450 production employees. The plant has been integrated without incident and production has not suffered in any way.

– A West Coast plant has had a similar experience integrating Orientals.

– At another of our Midwest plants, our employment manager is a Negro. And so it goes.

The final step taken to implement the program at Honeywell was to publicize that the company does not discriminate. This publicity has been especially directed to minority groups. It is most important that they know and understand the policy. That encourages them to qualify themselves and to seek the company out for employment. They have been informed of the kind of products the company produces and the types and kinds of job opportunities available at Honeywell. An effort is made to acquaint members of the community, educational institutions, and representatives of minority groups with the education, training, and experience required at Honeywell so those who apply are likely to be hired and those who are hired are likely to succeed and advance.

As part of the publicity, company representatives have actively participated in meetings and conferences throughout the country. For example, at a recent meeting jointly sponsored by the College Placement Council and the President's Committee on Equal Employment Opportunity, over 300 representatives of industry met with the presidents and placement directors of 70 predominantly Negro colleges to discuss a problem of mutual interest – how to better educate and utilize Negroes. A statement by Arthur A. Chapin, Assistant Secretary of Labor, at this conference summarized the problem and a positive course of action for solving it. He said:

> "Isolation has too long hobbled and fettered the knowledge by faculty and students of the emerging technology in America. Growing up with automation is less painful than feeling its impact after leaving the campus. I further suggest that business encourage student and administration . . . visits to their industrial plants, computer centers, research establishments, and office headquarters, in order that graduates and teachers alike understand the realities of our industrial society . . . We cannot afford to waste our human resources."

Another example of publicity through meeting participation was the Career Day for minority group high school students in Minneapolis and St. Paul, sponsored by the Urban League. Playing an active role in this program provided an opportunity to communicate directly with the Negro community about the company – its products and its job requirements. As a result, the Negro students who attended the conference may well become interested in technical careers since they now know that opportunities exist and that they will be given equal consideration. Moreover, they now understand what is required of them in the way of education and training if they are to qualify for these positions. Let me re-emphasize this point. It is imperative that Negroes know that the employment doors are open to them. But what's equally important — they must know just what is required of them if they are to qualify themselves for these opportunities and to be successful in them. We do not solve the problem, we worsen it when through misguidance we raise false hopes.

Results of the Program

But the test of the whole approach is: how has it worked? We have made gains. Our last Plan for Progress report shows that in two and one-half years under the plan the total employment at Honeywell has increased by only 10 per cent, while minority employment has increased by 42 per cent. Let me repeat my earlier statement — we have continued to maintain our standards for employment and promotion. These standards are applied fairly and consistently to all applicants and employees. We judge the individual on his qualifications, ability, and performance — not on his race, color, creed, or nationality.

CONCLUDING REMARKS

The progress toward equality of opportunity in employment made to date has not been easy. We realize that the future may be even more difficult. Many companies, like Honeywell, have been making progress by hiring qualified minority group applicants who had prepared themselves in spite of the odds against their having a chance to use their talents. We have been upgrading and promoting these few in our plants and offices. Some of this small number of qualified minority group employees hold important positions in our company. The limited supply of qualified Negroes is probably close to full employment. The real challenge lies ahead. In the future, the problem may well be more to afford opportunity for education than for employment. Placing individuals in positions they are not trained or qualified to hold sets them up for failure and humiliation, harming the individual as well as the company. Therefore, it is imperative that attention be directed to assuring equal opportunity for sound education and training.

We in industry can help by visiting schools and colleges that serve minority group students and discussing with the school officials and faculty our employment needs and the types of training required to meet them. We can assist them in reviewing their curriculum in light of the changing industry needs. We should invite key minority group leaders and educators to visit our plants and facilities in order that they may better understand our employment needs. This will also provide them with a better basis for altering and improving their curriculum and for communicating to students and other members of their community what they need to do to take advantage of employment opportunities.

These activities have worked for Honeywell and have contributed to the progress it has made so far. But the job is far from done. The great bulk of the task is still ahead.

7

MINORITY GROUP EMPLOYMENT AT GENERAL MOTORS

Harold S. McFarland*

This article pertains to minority group employment in the General Motors Corporation. It will cover the General Motors policy and the way in which it has been disseminated, discuss the manner in which the work force has been integrated, outline some of the recruiting practices, and touch upon participation in activities which are related to minority groups.

HISTORICAL

General Motors had a well-established, published nondiscrimination-in-employment policy in effect for a number of years prior to the introduction of the Plans for Progress Program. Originally, this policy stipulated that equal employment opportunity would be extended to all persons without regard to the individual's race, creed, color, or national origin. Subsequent developments at the state and national level required the company to amend the policy to add age and sex to the aforementioned factors of race, creed, color, or national origin. This was accomplished several years ago, and we are convinced that the provisions of the policy will meet the stipulations set forth in Title VII of the Civil Rights Act when it becomes effective in July of 1965.

Prior to the introduction of the Plans for Progress Program, the General Motors policy of nondiscrimination in employment was disseminated to management at the corporation and plant level through the means of executive conferences and policy letters. In recent years, emphasis has been placed upon disseminating the policy through special meetings which have been held with all members of supervision in plants and facilities. In addition, the policy has been brought to the attention of employees through bulletin board posters and by means of quotations in employee handbooks, plant newspapers, and other media. All sources for recruiting personnel, such as schools, colleges and employment agencies, have been notified in writing regarding the corporation policy.

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*Director of Personnel Services, General Motors Corporation.

The Collective Bargaining Agreement

The collective bargaining agreement with the UAW-AFL-CIO, covering upwards of 340,000 employees, contains this provision:

> It is the policy of General Motors and the UAW-AFL-CIO that the provisions of this Agreement shall be applied to all employees covered by this Agreement without regard to race, color, creed, or national origin. Any claims of violation of this policy may be taken up as a grievance, provided that any such claim must be supported by written evidence by the time it is presented by the Shop Committee at a meeting with Management.

Promotion and Advancement

Promotions and advancements in General Motors are made on the basis of ability and capacity, with due consideration to length of service and without regard to age, race, color, sex, creed, or national origin. Likewise, wages, salaries, and benefit plans are uniformly applicable to employees without regard to age, race, color, sex, creed, or national origin. None of the physical facilities are segregated or limited as to use or availability by reason of race or color.

PLANS FOR PROGRESS

When the President's Committee on Equal Employment Opportunity adopted its program in 1961, General Motors was among the first companies to subscribe to the Committee's Plans for Progress Program. Under the provisions of that program, the company submits an annual report showing the number of nonwhites employed in various categories. The data are obtained from a head count survey conducted by responsible members of supervision in our plants and facilities using the definitions provided by the President's Committee on Equal Employment Opportunity.

Employment, Training and Utilization of Manpower

(1) General Motors employs some 44,000 nonwhites in the United States.

(2) Nonwhites employed by General Motors represent 9.2 per cent of the company's total employment in the United States.

(3) General Motors' total employment in the United States during 1963 increased 4.1 per cent over 1962. Nonwhite employment during this same period increased 13.2 per cent, or more than three times the 4.1 per cent increase in total employment.

(4) Nonwhites are employed by General Motors as engineers, researchers, supervisors, draftsmen, analysts, accountants, librarians, foremen, plant protection supervisors and patrolmen, physicians and nurses, safety inspectors, suggestion plan investigators, labor relations representatives, skilled tradesmen, and general office workers, as well as in a wide variety of production and maintenance jobs. Of the more than 44,000 nonwhite employees working for General Motors, in excess of 37,000 (85 per cent) hold jobs or positions falling in the assembly, fabricating, processing, skilled trades, office, clerical technical, sales, professional, administrative, and supervisory categories. The remaining 15 per cent are employed as laborers or service workers.

At the same time, the percentage of nonwhites in better job classifications has been increasing, the percentage of nonwhites in laborer and service jobs has been decreasing, clearly indicating the availability of better jobs for qualified workers. In addition, the number of nonwhites in training (at General Motors expense) for skilled and supervisory positions has increased substantially since 1961.

Nonwhites are in apprentice training for skilled jobs such as tool and die making and other crafts. Nonwhites are also included in cooperative programs for high school and college students. One of the divisions recently set up the first cooperative program in engineering ever established at Tuskegee Institute, a Negro institution.

Nonwhites participate in General Motors "in-plant" training programs leading to skilled trades positions and production foremen on the basis of their qualifications.

Nonwhites are included among the engineering students at General Motors Institute, a fully accredited engineering college at Flint, Michigan, which is financed entirely by General Motors.

(5) The nonwhites employed in production and maintenance jobs receive average wages well in excess of $6,000 per year. This taken alone means that they are in the top one-third income group in the nation.

But this is not the whole story. They also share in the company benefit plans, which include group life insurance, sickness and accident pay, the pension plan, supplemental unemployment benefits, and other programs paid for by the company which are for the protection of the individual employee.

(6) Nonwhites employed in technical, professional, and supervisory positions have a higher level of income and also have comparable benefit programs for their protection.

The integration of the work force in General Motors has, in line with the corporation policy, been accomplished over a long period of time. Aside from a few problems which occurred when nonwhites were promoted to higher paying classifications in some Southern plants at the beginning of World War II, the implementation of the policy has been completely effective and no incidents of a serious nature have occurred.

Compliance with Fair Employment Measures

The policies and practices of General Motors in this field are subject to constant observation by a federal agency — the President's Committee on Equal Employment Opportunity. In connection with its broad activities, this official agency has made 109 compliance surveys in more than 70 company operations. Based on its findings, the agency has commended General Motors for the progress already, and continuing to be, made. Furthermore, any individual who feels that he has not been treated fairly has recourse to the President's Committee on Equal Employment Opportunity, or to any Fair Employment Practices or Civil Rights Commission which has been established in his state or community.

Operating as it does in all fifty states, General Motors has not been found in violation of any municipal, state, or other local unit of government's fair employment practice code or statute.

At the federal level, only 49 cases of alleged discrimination have been filed with the President's Committee on Equal Employment Opportunity since the inception of that committee in 1961; and of these, 39 cases were dismissed as being without merit, while the remaining ten have not been adjudicated.

Among the nonwhites now employed in skilled jobs and in supervisory, engineering, and other so-called white collar jobs, there are quite a number who have held such positions for many years. Others have been promoted as they acquired skills through training programs or qualified for better positions on the basis of self-improvement and spare-time study under such programs as the General Motors Tuition Refund Plan. In addition, the company actively recruits qualified nonwhite engineering and other college graduates in colleges and universities across the country including a number of institutions whose student population is predominantly nonwhite.

THE NEED FOR BETTER EDUCATION

It is generally recognized that the subject of nondiscriminatory employment and employment opportunities is one which is broader than the policies, practices, and experience of any one company. More must be done to increase the number of nonwhites who have the educational background and qualifications for the clerical, managerial, and professional positions which are open in industry. As an example, in its college graduate recruiting program, General Motors, by the nature of its business, is looking for engineering graduates who have an interest in the automotive field. There are some 36,000 engineering graduates each year, but very few of these are nonwhites. The situation has special significance insofar as predominantly Negro colleges are concerned. Very few of these colleges and universities have an engineering curriculum, and information supplied by the United States Department of Health, Education and Welfare discloses that fewer than 200 students in these predominantly Negro colleges annually receive B.S. degrees in engineering. There has been an increasing demand for accounting majors at General Motors in recent years, and our experience shows that nonwhites who are trained in accounting are in very short supply.

In order to increase the number of nonwhites who are qualified for the better positions, work must be done in the grade schools, the junior high schools, and the high schools, so that those who have the ability will complete the courses necessary to gain admission to the engineering schools and other programs of training which lead to careers in fields in which there is a need. To this end, the company has participated actively in, and provided financial support for, programs which have been set up for the purpose of providing information to high school principals, guidance counselors, and teachers, outlining in detail the requirements necessary for minority youths to qualify for entry jobs in the plants and facilities of the corporation.

General Motors has joined with agencies working on this problem at the community level. Our personnel directors have participated in panel discussions to bring to the attention of students and their parents information on the opportunities which are open to those who continue their education and prepare themselves. Representatives of General Motors serve on the Board of Directors of such local organizations as the Urban League, and the company provides financial support for it at both the local and national level.

General Motors is one of the largest contributors to the United Negro College Fund, and company executives have been active in its support.

General Motors has an extensive program of support for higher education which includes a scholarship program, first announced in 1955 and now providing educational opportunities for more than 1,600 students at some 220 colleges. The selection of students to receive these awards is made by the colleges, and since the inception of the program in 1955, nonwhite students have been included among the recipients.

CONCLUDING REMARKS

The areas of personnel policy and administration which are discussed herein have been matters of concern to General Motors for many years. We expect to continue our efforts, both in the implementation of policies within the company, and in broader cooperative efforts which will provide the basis for further progress in the future.

8

WESTERN ELECTRIC'S COMMITMENT TO FAIR EMPLOYMENT

R. G. Lawrence*

The concerted attention Western Electric has given to its equal employment opportunity policy has had a dual effect in the company. It has increased the number of Negroes in every job level from production worker to management. And it has generated among its management a heightened awareness of the company's relationship to society.

Western Electric, manufacturing and supply unit of the Bell System, has had a policy of recruiting, hiring, and assigning employees on the basis of merit alone at least since 1924, when it was spelled out in a document defining employment policies. But in July, 1961, it reaffirmed that policy – and pledged affirmative action to fulfill it – when it joined the first group of corporations which signed a "Plan for Progress" with the President's Committee on Equal Employment Opportunity.

The areas spelled out in the plan involved: 1) dissemination of information about it; 2) administration; and 3) employment, recruitment, and training.

DISSEMINATING INFORMATION

Within a day after the plan was signed, all Western Electric's management employees were informed through a special bulletin that the company had adopted the Plan for Progress. Supervisors in turn were expected to transmit this news to non-management employees. Subsequently all employees were sent letters, signed by a vice-president or the head of the location where they worked, explaining the Plan for Progress. Since these original messages were sent, the company has used *WE Magazine*, which is distributed to all its employees throughout the nation, the employee newspapers published at its various locations, and bulletin board displays to feature company activities – and to reflect the policy – stemming from the Plan for Progress. Newsletters for management personnel periodically have contained detailed interpretations of what the plan means to Western Electric, and of the progress achieved to date. In observance of the third anniversary of the signing of the plan, the company published a special report delineating the entire spectrum of activities conducted under the Plan for Progress.

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*Director, Personnel Administration, Western Electric Company.

But written communications alone could not convey the full weight of the company's commitment to the Plan for Progress. In order to emphasize its importance, compliance has been reviewed regularly at the President's Conference, a semi-annual meeting of the company's president, executive staff, and heads of major manufacturing and service locations. This subject frequently has been on the agenda of many other organizational conferences within the various divisions of the company.

Simultaneously the officers of the company undertook an effort to emphasize Western Electric's endorsement of the policy of equal employment opportunity in appearances before the general public and before company employees. For example, in the course of an address delivered at Little Rock, Arkansas, in November, 1961, the president of the company listed three reasons why Western Electric people should be interested in alleviating the plight of the Negro and of all the nation's disadvantaged minorities. "The good opinion of the world is only one of them," he said. "A more compelling one is that prejudice breeds waste, the most tragic kind of waste, the waste of human resources. But in the final analysis there is one reason above all others for giving our best management attention to making equal opportunity come true – and that is because it is right." Like all talks on this subject by company officials, this speech was reported prominently in company publications.

The company moved on other fronts as well to disseminate information about the policy embodied in the Plan for Progress. For many years the subject of the Negro in America has been discussed in various training programs offered to the different levels of Western Electric management. This phase of these training programs has been intensified. For example, this subject has been included in the curriculum of the six-month Management Training Program ever since its establishment in 1947. But now participants in this program, who are selected for their promise as potential executives, make an extensive study of the nature of prejudice. In addition to readings, they participate in two days of lectures and discussions conducted by leaders such as Dr. Harold Lett of the National Conference of Christians and Jews, Dr. Kenneth Clark, Professor of Psychology at City College of New York, and James Baldwin, the noted novelist and playwright.

To further underscore the company's commitment to the Plan for Progress, the heads of all Western Electric locations — from the largest plant to the smallest distribution center — were invited to a Plan for Progress conference on the premise that once they returned to their home locations they would be able to transmit the knowledge they gleaned to all their subordinates. In order to provide for face-to-face discussions and seminars, it was decided to have two conferences — one for location heads in the East, the other for those in the West.

The first of these conferences was held in November, 1963, the second in January, 1964. The format was basically the same. First the company's policy of equal employment opportunity was affirmed by H. G. Mehlhouse, Vice-President of Personnel and Public Relations. Then a brief history of the civil rights movement was presented, along with an analysis of the major organizations serving the Negro community. Next the conferees saw a videotape of a program featuring the Rev. Dr. Martin Luther King, James Baldwin, and Malcolm X. Dr. Clark then took over the podium to discuss the current aspirations of the American Negro. He also moderated a panel discussion in which the participants were James Farmer, executive director of the Congress of Racial Equality, James Foreman, executive director of the Student Nonviolent Coordinating Committee, Roy Wilkins, executive director of the National Association for the Advancement of Colored People, and Whitney Young, Jr., executive director of the National Urban League. So stimulating were the discussions initiated by this panel that they were continued by Western Electric's managers and the guest panelists late into the evening. P. A. Gorman, president of Western Electric, the dinner speaker, emphasized company policy and described the challenge ahead when he said, "We have a responsibility — both as a corporate citizen and as individual citizens — to do what we can to make the promise of America come true for all her people."

The second day was devoted to discussions of the company's experience in hiring as well as upgrading Negroes and members of other minorities and the manager's community relations responsibilities. In addition, each location head was presented with two items: an outline for a conference involving local Negro leaders that he could arrange at his own location and a discussion guide that provided the basis for a series of small group meetings with first and second level supervisors.

Among the materials sent out in advance of the conference was a checklist providing detailed guides for those responsible for implementing the company policy. Sample questions asked in the checklist were

- Do you maintain regular contacts with local groups concerned with racial problems?
- Are you a member of, or do you have a personal representative on, local community bi-racial committees?
- When you advertise for job openings, do you advertise in Negro newspapers?
- Are you recruiting applicants at high schools with predominantly nonwhite enrollments?
- Does your location cooperate with and support community vocational training programs?

Following the company-wide conferences, several locations have had meetings of their supervisory staffs to review the implications of the Plan for Progress. Others have had conferences in which their supervisory staffs and leaders of the local Negro community have participated. In still other cases, supervisors have met with Negro leaders to review areas of mutual interest in their home communities.

Thus, through written materials, lectures, company conferences and training programs, the broad scope of Western Electric's commitment to equal opportunities is being communicated on a continuing basis to all the company's employees.

ADMINISTERING THE PLAN FOR PROGRESS

The Plan for Progress assigns responsibility for supervising Western Electric's performance to the vice-president, Personnel and Public Relations. In discharging this responsibility, he periodically reviews the progress made in employment, and he recommends programs that will improve the company's performance. He also keeps informed of the activities of other Plans for Progress companies generally.

As another instrument for reviewing and improving compliance with the Plan, the company established an Interdivisional Coordinating Committee on Nondiscrimination. Composed of representatives of the various divisions of the company – manufacturing, service, personnel, legal, and so forth – it meets frequently to review matters of current interest in the area of equal employment opportunity policy and to recommend appropriate actions.

The coordinating committee reviews such subjects as recruiting among minorities, personnel advertising in the Negro press, and participation of nonwhites in out-of-hours activities – those sponsored by the company and those sponsored by employee organizations. On its initiative, the company's testing procedures are constantly reviewed to assure that they are fair to all applicants.

While the mission of the coordinating committee is wide, its primary responsibility – to maintain emphasis on equal employment opportunity for all qualified persons – is very specific.

Thus, by assigning responsibility for this program to one of its top officers and by creating a high-level committee to review results on a continuing basis through both formal and informal reporting procedures, Western Electric has taken steps to assure that its Plan for Progress is carried out in all company locations.

EMPLOYMENT, RECRUITING, AND TRAINING

Since Western Electric signed its Plan for Progress, employment of Negroes has increased in all job categories – in the ranks of managers and supervisors, of professional and technical employees, of clerks and stenographers, and of craftsmen as well as operatives.

This increase was achieved through a broad spectrum of company activities designed to assure members of the Negro community that they would be welcome as Western Electric employees and would have opportunity for advancement.

For example, while Negro personnel were encouraged to improve their qualifications, a special inventory of employee skills was made to assure that all recent educational achievements were being utilized by the company. It was found that a number of Negro employees had taken advantage of the company's college tuition refund plan to advance their own education. Among them was a man who, while assigned to handling materials in a shop, had completed college and law school on his own initiative. He since has been promoted to a supervisory rank.

Nonwhites were encouraged to take advantage of company-sponsored training programs to advance their skills.

The company also has undertaken a number of other activities in order to locate qualified Negro employees. For example, the company's manufacturing plant in North Andover, Massachusetts, organized a nine-week program of career seminars for selected marginal students in Andover and North Andover high schools. This program had four objectives: 1) to broaden the students' interests, 2) to familiarize them with job opportunities and requirements, 3) to point out the relationship between education and the kind of employment they could expect, and 4) to encourage them to continue their studies through high school and, if possible, beyond. This program involved a series of meetings between the students and a group of young Western Electric employees who informally discussed their own high school days – the courses they liked and disliked, their scholastic strengths and weaknesses, the role played by different courses in qualifying them for employment, their search for jobs, and similar subjects. So successful was this concept that it is now being introduced by school officials to industries in the nearby Lowell and Lawrence areas.

The company has donated the services of a number of specialists on its staff to the National Urban League's Skills Bank program, which is designed to locate vocationally and technically trained men and women, skilled craftsmen, and professional and semiprofessional workers who currently are employed in jobs that do not fully utilize their talents or who are unemployed.

Along with a number of other employers, the company has helped support an eleven-week secretarial training program in New York City; this program emphasizes typing, shorthand, English, office practices, grooming, and deportment. Instruction for this course, which was organized by the National Urban League, is offered by New York University. It is designed for women who either have not had any actual work experience or whose skills are not up to standard. Graduates of this course are free to seek employment wherever they wish, and Western Electric succeeded in recruiting only a small number of them.

Western Electric's Hawthorne Works, located on the outskirts of Chicago, conducted a stenographic training program for women with sub-standard clerical skills. It was able to employ everyone who completed the course. The Hawthorne Works also has participated in an employment development fair held in the near North Side of Chicago, an area inhabited chiefly by Negroes and Puerto Ricans whose educational achievements are low and where the unemployment rate is about 17 per cent. The company's exhibit emphasized the importance of education. Company representatives were on hand to answer questions and to describe the procedures for obtaining employment.

The company's plant in Kearny, N. J., has worked with educators and representatives of other industries to effect a revision of the general high school curriculum offered to students neither bound for college nor vocational training. As revised, the curriculum includes practical physics, applied mathematics, and a general science course, all geared to the needs of industry today. The Kearny Works also is participating in a special program for dropouts under which they alternate classroom sessions and work experience.

As a matter of course, employment advertisements are placed in Negro publications. All such advertising, in whatever medium it appears, and all recruiting literature indicate that Western Electric is an equal opportunity employer.

The company also has extended its recruiting activities in Negro colleges. In 1962 it added four Negro colleges to the group of institutions at which Western Electric systematically recruits. Two years later recruiting was being conducted at twelve predominantly Negro campuses and plans are being made to increase this number still further. In the course of regular recruiting activities conducted on integrated campuses, Negroes are interviewed routinely and when found to be qualified their applications are processed. Furthermore, the company's various locations conduct their own recruiting activities at high schools, vocational schools, and colleges in their own vicinities, and consequently additional Negroes have been added to Western Electric's rolls.

Yet, despite this increased activity, Western Electric recruiters during their visits to Negro campuses became aware that the placement officers in some of these colleges were not familiar with the current needs of business or, because of past experience, hesitated to guide students toward careers in areas other than those traditionally open to nonwhites – teaching, civil service, medicine, and law. Consequently, after a series of exploratory conversations, Western Electric decided to co-sponsor a conference for placement personnel in Negro colleges. Devoted to the topic "New Demands on the Placement Officer," the conference was held in December, 1963, at Morgan State College in Baltimore, Maryland. It dealt with subjects such as "Opportunities in Business and Industry," "Pre-Recruiting Planning by the Placement Officer," "Employer Standards of Selection," and "Records, Forms and Transcripts." Speakers included placement officers from the University of Pennsylvania, Duke University, Lehigh University, and recruiting personnel from RCA as well as Western Electric.

It is expected that, as a result of this two-day conference, recruitment for business generally will be more successful than in the past on Negro campuses.

The cumulative effect of these programs has resulted in increasing numbers of Negro applicants. But the impact of what Western Electric is doing is best demonstrated by an event that took place in the summer of 1963. Three Negro professors were hired to work in the company on the theory that their job experiences would enrich their classroom programs. At the end of the summer, they met to review their experience. During this meeting, one professor admitted he had embarked on a teaching career without the conviction that his students ever would be able to apply fully what he taught them. However, he continued, after seeing what Western Electric is trying to do, his career suddenly had become a real challenge, since he now feels that if he teaches well his students will be able to use their knowledge constructively.

COMMUNITY LEADERSHIP

Western Electric's Plan for Progress specifies actions that the company and its employees will take to increase job opportunities for nonwhites. But the spirit it generated has led countless Western Electric people to work on their own time in their home communities to build a climate that will ease the tasks of eliminating discrimination and of promoting racial equality – the unfinished tasks of American democracy.

In doing so they were heeding the advice given by the president of Western Electric when he accepted the National Urban League's Equal Opportunity Day Award in November, 1963. At that time, he said, "the businessman's responsibility does not stop at the factory gate. No company is an island. Its fortunes are bound up with the community around it from which it draws its people. With the best will in the world, a company cannot make equal employment opportunity a reality if the community – through discrimination, deliberate or unwitting – deprives some of its citizens of the chance to qualify themselves for the more and more demanding tasks of industry. Equal employment opportunity and equal educational opportunity are inseparable."

Western Electric's president continued by suggesting that "the initiative businessmen apply to this urgent national problem ought not to be limited to providing jobs to demonstrably qualified people. What is needed is business leadership at the community level to join with other citizens in finding ways to level the barriers to opportunity – barriers which, if they deny the legitimate aspirations of some of the community's residents, will in the long run deny to all of them their fullest potential for growth and progress."

This injunction has been accepted by Western Electric people in a variety of ways. Some are members of civic groups or church organizations which are seeking solutions to the problems nonwhites face in their home communities. Thus, several engineers at the company's Indianapolis Works are participating in a community program to encourage youngsters to complete their high school education. These engineers function, in effect, as counselors for troubled high school pupils. They meet with youngsters identified by their teachers as potential dropouts and offer their support to help them overcome their immediate problems, meanwhile urging them to remain in school until they graduate. The youngsters can consult personally with their counselors and are invited to telephone them day or night whenever pressing problems develop.

While a machine operator in the Kearny Works is a member of the New Jersey Governor's Committee on Equal Employment Opportunity, a vice-president serves on a committee of the National Urban League. The Superintendent of Labor and Industrial Relations, Purchasing and Plant Services at the company's Allentown Works is a member of the Pennsylvania Commission on Human Rights and a member of the management staff of the distribution center in Nashville, Tennessee, serves on a metropolitan committee on human relations.

ENLARGED SENSE OF RESPONSIBILITIES

As was noted earlier, Western Electric's Plan for Progress is helping the Negro community. But equally important, though less tangible, it has enlarged the horizons of the company's management employees. They have become aware that each of them, whatever his level, has a personal responsibility for implementing company policy, and that progress of the company is no more than, and no less than the sum total of their individual efforts.

Finally, they are better acquainted with the problems of the society about them — problems of education, of urban blight, of housing, of health, of welfare. They realize that the company cannot isolate itself from the community in which it operates. This is a valuable lesson, because it reflects industry's growing awareness that the problems of society are its problems. Industry — and business in general — cannot function in isolation. In our free enterprise system, its responsibilities do not end at the plant gate.

As our people move creatively to resolve the problems of the society about us, and as they bring to their jobs the sensitivity and responsiveness they develop in coping with their community's problems, our company will benefit as will all citizens.

9

INTEGRATING THE WORK FORCE IN SOUTHERN INDUSTRY

E. G. Mattison*

In discussing the topic "Integrating the Work force in Southern Industry," I cannot speak for all southern industry. Emphasis is only on the Lockheed-Georgia Company, which is the largest industrial firm in the South. The purpose here is to relate some of the experiences, some of the concerns, and some of the hopes for the future at Lockheed-Georgia. This will in no way be a success story, simply because it is too early to write such a story.

HISTORICAL

The Lockheed Aircraft Corporation started and grew in California. Company policy there for many years was to give equal opportunity and treatment to all minority groups, and we were active in founding the Committee on Merit Employment in the Los Angeles area. In January of 1951, the Government asked Lockheed to reactivate Air Force Plant No. 6 in Marietta, Georgia, just seventeen miles from Atlanta, to handle two major national defense programs: modification of the B-29 and building of the B-47 jet bomber. To give an idea of the size of the Georgia operation, the main building is the largest factory under one roof in the free world, and the company is the largest private employer in the Southeast.

In establishing a new gigantic operation in Georgia, we were faced with a different climate in regard to integration than we had in California. We intended to implement the corporate policy of non-discrimination, but this time, in an area with established customs and laws and strong emotions. We realized that if we were not careful in gaining community acceptance, we might have some unpleasant incidents and unfavorable publicity with which to contend. We went about it very quietly and slowly; not timidly, but wisely.

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*Director of Industrial Relations, Lockheed-Georgia Company, Marietta, Georgia.

Picture with me those first few months of operation at Marietta. The plant had been built during World War II and was operated by Bell Aircraft in those days. The building was closed after V-J Day and used for storage of machine tools. In 1951, when Lockheed reopened the plant, the spider webs were cleaned out, new equipment was brought in, and a rapid increase of employment to 10,000 people began. By 1965 the company was to be 20,000 strong.

The Need For Skilled Employees

The company had a desperate need for skilled aircraft workers, tooling people, and engineers. Luckily, many experienced aircraft people were still around—former Bell Aircraft employees. Many migrated from other aircraft companies. We took all of the experienced people we could get, mostly white, but some Negro, when we could find them. The South, industrially, was then, and is now, young. Fourteen years ago there were limited opportunities for a man to become a skilled machinist, either through experience or through vocational education. There was no time to prepare or present extensive training programs at first. Underlying the whole problem was the urgency of the United States defense effort—to get the B-29's and B-47's out of the hangars and off to Korea.

From the very beginning the plan was to use Negroes in both skilled and semi-skilled jobs, as well as in managerial positions. It soon became evident, however, that there was a need for Negroes to upgrade their skills. Some were applying for jobs but they did not meet the standards. And, of course, the company could not lower standards. We could not allow a man to work on an aircraft who was not qualified to do so. Not only would this jeopardize the lives of that ship's crew, but it would endanger the very life of the company and its ability to offer employment to anyone—white or Negro.

Training and Apprenticeship Programs

We embarked on a major training effort for the entire work force. Some courses were required and given on company time. Others were voluntary and given on the employees' own time, at no expense to them. During these early days, we offered twenty-three different specialized courses in all phases of fabrication and assembly work. Evening training programs were very well received and hundreds of people registered for them. Many of these were Negro, but very few Negroes showed up for class. Those who did soon lost interest and dropped out. We found out later why this was so, and the reasons are discussed later. But it was very clear that a pattern was emerging: that minority group members lacked qualifications for hire and promotion, and they failed to respond to developmental opportunities when they were available.

In 1955 and 1956 the company solicited applications for Negroes to enter apprenticeship programs. There was a marked lack of Negro applicants. In 1959 announcements about the apprentice program were sent to high schools in the area, including twenty-two Negro high schools. The response: no Negro applicants. In more recent years, those who do apply make a poor showing on their screening tests. And still more recently, those who apply and are accepted do not perform well in their training classes. I am not pointing an accusing finger. I am simply reciting some facts that underlie our present approach to equal opportunity.

There are some other facts that gave us hope, however. More and more Negroes were being placed in a wider variety of job classifications. Professionally trained Negroes were hired as engineers, programmers, and mathematicians—all without incident. By 1955, seven of our supervisors were Negroes. In 1959, two Negro girls were hired as clerk-typists and placed into a previously all-white department—without incident.

A PLAN FOR PROGRESS

In May of 1961, the president of Lockheed Aircraft Corporation signed with then Vice-President Lyndon Johnson, a document entitled "Plan for Progress." This was a formal agreement between the company and the federal government to pursue a policy of non-discrimination—a policy we had actually had in effect for many years. Lockheed was the first company to sign such an agreement and over 250 other firms have since followed suit.

Recruiting Personnel

Continuing a policy of non-discrimination under the Plan for Progress, recruiters were sent to the campuses of Negro colleges, looking for qualified job applicants. It has been found that many

Negroes with college degrees are not as well-schooled as graduates from predominantly white schools. The standards of many Negro schools are not as high—and so the Negro graduate cannot compete on an equal basis. We, as industry, cannot close our eyes to this inequality. We feel we share a community responsibility to reduce this inequality—for the long-range good of our whole society. Our employment advertisements say that Lockheed is an Equal Opportunity Employer. To the Negro applicant who answers such an ad, shall we say, "Sorry, you're not qualified," and turn our backs?

I am thinking of a young Negro lad we hired into an apprentice program. He just barely met the minimum qualifications, but we were willing to give him a chance. Within a few weeks after Norman began the classroom part of his training, he failed his subjects. We could no longer keep him in the apprentice program and offered him a lower skilled job, which he accepted. As I reflect on this incident, I become very concerned and my concern is quite apart from the dollars we spent in testing, hiring, processing, and training this young man. I am concerned because I feel that we did Norm a disservice. We offered him a challenge that he could not meet. We made it possible for him to experience a failure, perhaps one of many for him in his struggle to better himself. This can be very damaging to a man's ego and ambition, and it is happening to Negroes and others every day. We should be very careful about opening doors for people who do not have a reasonable chance of succeeding.

This approach cannot stand by itself, however. We, as management, cannot say, "Do not come to us until you are skilled." We must couple our policy of avoiding failure with a responsibility—to do what we can to help Negro and other underprivileged citizens prepare themselves even before they enter our employment office. This is good business practice and will benefit the whole community.

Mention was made earlier of the fact that we had discovered why Negro employees were not responding to the opportunities offered for upgrading their skills. We realized that the Negro was coming to us from a world beyond the reaches of the plant, a world that had so often denied him the chance for improvement. Many of us, when we were younger, knew that some day we would choose an occupation and prepare ourselves for it. This has not been the case for a large segment of our population—Negroes included. They have not experienced the privilege of choice. They have not typically aspired to occupations materially different from those held by their parents. Expediency in earning a living today—not choice, and the longer road of preparation for the opportunities of the future—has prevailed in too many instances. The consequence of this has a great deal to do with the absence of Negro applicants for the "opportunity" job—and other frequent failures to compete, to persist on the job, and to achieve success—such as have been experienced in our Lockheed-Georgia plant.

Education and Community Projects

It seems there are things that happen to Negro citizens before they appear in the employment office—things that cannot be ignored if we are to follow the spirit, not just the letter of our Plan for Progress—hopelessness, improper counseling, poor motivational influences, and inadequate education. Lockheed has realized for some time now that these are the areas it must work in to assure true equal opportunity for all. We have gone into the community to do "grass roots" work that may not give us a job applicant next week or next month, but we hope a few years from now, through enrichment of the educational and motivational processes.

In this connection, here are some of the things the company is doing and attempting to do:

1. *Colleges*

The company has worked with Negro colleges and universities, trying to communicate to them what it looks for in their graduates —trying to tell them about company standards. Their staffs and faculties have been very eager for counsel. They, too, are aware of the inability of their graduates to compete in the professional labor market.

For instance, Negro college students by the busload have been brought in from Tuskegee Institute in Alabama to spend an entire day in the plant. They are permitted to observe professional and skilled people at work—at drawing boards, in chemical labs, metallurgical labs, and computer operations. The company tries to give them a feel not only for the available opportunities but also for the high degree of professional competence required.

Over the years, Negro professors from Tennessee Agricultural and Industrial College, North Carolina Agricultural and Technical College, and Tuskegee Institute have been hired for the summer. The main interest has been to have them carry back to their schools curriculum ideas to help them upgrade their standards.

The president of Morehouse College, a Negro school in Atlanta, called one day in 1959 to tell the company of his inability to find professors qualified to teach advanced mathematics and physics and to ask if we could help. As a result of his call, the company provided two top engineering specialists with doctoral degrees. Their work schedules were arranged so they could both teach and carry on their duties with Lockheed. This same situation occurred again in 1963.

We are working closely with the predominantly Negro colleges to help them upgrade their faculties, to assist and encourage curricular improvements, and to help them achieve an output of graduates with the preparation they need. In our case, this also means fewer sociology, biology, teaching, and physical education majors, and more emphasis on technical subjects.

2. *High Schools*

The company has also done a great deal of work with the high schools, trade, and vocational schools. As an example, a group of Negro high school counselors were brought into the plant for an all-day educational program, showing in detail the industrial application of high school math and other subjects to the apprenticeship program. This seemed to be particularly meaningful. Plant tours for Negro teachers, school administrators, placement officers, and students are held regularly to familiarize them with the variety of industrial jobs—technical and non-technical, skilled and semiskilled, professional and managerial—all open to minority groups.

In speaking to high school and college counselors, teachers, and administrators, we always try to be as forthright and honest as we can. We do not paint a rosy picture for them or hold out glowing promises. We are realistic with them and hope they will be realistic with each other and with the students they teach and counsel. They like the approach: "You as educators have a responsibility to produce better qualified students. We in industry have a responsibility to help you."

3. *Community*

Aside from working with educational institutions, we are working actively with responsible community agencies. A member of the Training Department serves as the Chairman of Youth Incentives and Education Committee of the Atlanta Urban League. This committee deals with youth motivation, disseminating occupational and career information, stimulating guidance counseling in Negro high schools, sponsoring student visits to industries, helping to solve the school dropout problem, upgrading school standards, and promoting more enlightened views of competition in today's more technical world.

This committee is also a very fine vehicle for meeting with leading members of the Negro community, getting to understand the hurdles they are trying to clear, and discovering where we can help.

We feel deeply responsible in working with the community and its educational institutions because we realize that our policies will influence the practice of other businesses. We are not just operating within a climate. Because of our size and wide influence within the state, we help to create the climate. We are particularly fortunate in that we are in an area of the South where there has been relatively little racial strife. Schools, parks, and businesses have been integrated peacefully. This is making our job easier.

Recently, the Air Force made an audit at the Lockheed-Georgia Company of progress in providing equal opportunity. The audit report said that the plant was a "showplace" of smoothly carried-out integration and could be set down anywhere in the country as an example of what can be done. This makes us very proud and provides an additional incentive to continue grass roots work with the Negro community.

CONCLUDING REMARKS

But it is too soon to write the success story of the integration program at the Lockheed-Georgia Company—we have just begun. Perhaps, however, it is worth summarizing the crown points or distinguishing features which have brought the company where it is today.

First, the program evolved from a basic policy decision of nondiscriminatio[illegible]enced throughout the plant as a will and determination of management to provide equal opportunity for all.

Second, it has been based on careful, thoughtful planning.

Third, as we have gained ground, efforts have been accelerated within the limits prescribed by the climate existing at the time.

By 1961, we had come a long way, and the momentum of the program was well established.

When Executive Order 10925 appeared—when equal employment opportunity began to unfold—we knew that Lockheed was going to have a Plan for Progress.

We were ready to be the first Plan for Progress Company.

The Lockheed Plan contemplated and has resulted in renewed efforts in training, apprenticeship programs, recruiting, selection, re-examination of qualifications, communications, and cooperation —all designed for furtherance of, both in letter and spirit, the objectives of the President's Committee.

From this it can be seen that the company has a deep interest in the subject, manifest in our program of voluntary action over the years.

The real effort is to get employers to recognize that this is the country's problem. It is beyond the matter of law and compliance. The basic problem today is to help communities raise standards, help high schools, colleges, and universities to raise standards—to help motivate this country's youth to compete in a society whose very by-word is competition among the qualified.

This applies not only to all minorities, but to all underprivileged. The fallout of such an effort will be in the whole system of education in the United States. It does not involve quota hiring nor preferential hiring. That is not what we are seeking. Each individual is considered on his or her own merits.

This effort does, however, recognize that a sizable portion of our population is underprivileged and, therefore, it is a community problem.

If, as a nation, we are going to be successful in this effort, it will be through the voluntary action of employers, not necessarily exactly as we have done, but certainly with a forthright sense of responsibility for the basic precepts of equal opportunity for all and with a will and determination to do something about it.

10

PROGRESS IN EQUAL EMPLOYMENT OPPORTUNITY AT GENERAL ELECTRIC

Virgil B. Day*

Thirty years ago, Gerard Swope, then president of General Electric and a man of deep personal conviction on the subject of discrimination, included these words in a statement of company policy: "There shall be no discrimination by foremen, superintendents, or any executives of the Company against any employee because of race, or creed...."

This admonition does not seem remarkable today. But to the best of my knowledge, it was the first such declaration of nondiscriminatory policy made by a large American manufacturing company. Whether it was first or second or sixth is not important; it was a pioneering statement. My associates and I, who are the inheritors of that pioneering spirit, feel a certain pride in it.

But as we look into the face of 1965, we cannot feel complacent.

A very few days ago we received a letter from a Negro man in California, commenting on a pamphlet we had prepared to encourage young Negroes to prepare themselves for careers in industry. He said in part:

"You tell these boys that they can get jobs, but they understand neither your words nor the assumptions beneath the words. I knew children in Chicago who were on the third generation of relief; they did not know adults normally work or look for work. They see nothing in their lives that shows education is useful. Many have no stable family structure; there is no continuity in their lives. Many Negroes, man and boy, live in almost a null-time; nothing much ever happens; if work is available, it seldom lasts long; no activity requires or regards their sustained attention. An appalling percentage of Negroes live lives not significantly different, yet they are told to become electronic engineers."

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*Vice-President, Management Development and Employee Relations Services, General Electric Company.

No, we cannot feel complacent. We are still trying to make progress, and complacency is the enemy of progress. We recognize Mr. Swope's statement of 30 years ago for what it is: the formal starting point of one of two main thrusts of General Electric's equal opportunity effort.

EQUAL OPPORTUNITY EFFORT

The first thrust is the articulation and continued re-emphasis of a clear policy of non-discrimination. While this, in a sense, may imply a negative approach, its meaning is definitely positive for both society and for the company.

The second thrust is the creation of a corporate climate in which true equality of opportunity can flourish. It involves no less than applying the same kinds of initiative we apply in marketing, in production, in employee relations, in engineering to those aspects of civil rights which are the proper concern of a large manufacturing corporation.

We believe that these two approaches complement each other, and are, in fact, interdependent. The policy, to be truly effective, needs to be buttressed by affirmative action. And such affirmative action must be founded on the base of a clearly understood corporate decision. (In recent years, of course, it has also been founded upon various state laws, laws regarding defense contractors such as General Electric, upon Plans for Progress action, and now upon the Civil Rights Act of 1964. But as General Electric has made progress in the equal opportunities field, we have found it most helpful to be able to make clear to our own organization that our policy predates the law. We have not been dragged grudgingly into trying to do what is right, and our action was not dictated by government pressure or a desire to be well regarded.)

THE DEVELOPMENT OF THE PROGRAM

Let us look then at the development of these two paths over the years.

First, policy.

In this field, the basic policy must be reiterated periodically from the top if the men and women down the line are to understand that the company is in earnest.

Thus, Charles E. Wilson, who succeeded Mr. Swope as chief executive officer, reissued Mr. Swope's original statement over his own signature in a booklet distributed to employees throughout the country. In addition, Mr. Wilson served as Chairman of the President's Committee on Human Rights. Speaking for the committee, Mr. Wilson said, in part: "...the protection of Civil Rights is a national problem which affects everyone. We need to guarantee the same rights to every person regardless of who he is, where he lives, or what his racial religious, or national origins are." While this view was expressed as a part of the transmittal of the report to President Truman, it was also widely circulated throughout the company as a re-affirmation of Mr. Wilson's convictions on the equal opportunity question.

Ralph J. Cordiner, Mr. Wilson's successor, believed that discrimination is not only wrong in principle, but a handicap to the business. He stated: "We continue to feel that, as a matter of sound business we should offer both employment and advancement opportunities to the best qualified individuals available, without regard to their race, creed, or color."

A year ago, Fred J. Borch became president of the company, and immediately made it clear that the policy still applied, and that he expected complete compliance: "Our policy is clear, and each level of management must make sure it is well understood—and fully implemented at every location."

His words were underscored by those of the new chairman of the board, Gerald L. Phillippe: "Steady progress in providing equal opportunity will not only move our country closer to its high ideals, but also help to remove some serious obstacles to accelerated economic growth. General Electric's Equal Employment Opportunity Policy must continue to be implemented on a Company-wide front. This is what we all must do. *It is not an optional matter for any one of us.*"

These statements of position, each with different emphasis, but essentially statements of the same basic philosophy, have been widely circulated throughout the company. They have been buttressed with letters of instruction from our personnel practices component in New York to employee relations managers and personnel specialists in our various product businesses. They have been re-emphasized in national and regional conferences of employee relations personnel.

Implementation in a widespread, diversified, decentralized company of 250,000 people of an equal opportunity policy is infinitely more complex than taking a discriminatory sign off a door. Hiring decisions are made or influenced by literally thousands of General

Electric people, ranging from professional personnel specialists to the individual local sales manager who is trying to determine which of several qualified applicants he wants to serve as his secretary.

An unreceptive attitude on the part of an interviewer toward an individual applicant may, in effect, be just as discriminatory as "a sign on the door." Once the fundamental criteria of qualification have been established, employment decisions may tend to become more subjective than objective. And the factors affecting promotion are so diverse as to be almost infinite. General Electric has its own careful and detailed procedures for evaluating employee achievement. Has John Doe earned a pay increase? Is Mary Roe ready to move to a higher level job? Does Richard Coe qualify for special training to enable him to take on added responsibility?

Thus, we have become increasingly aware over the years that affirmative action, to complement the basic policy, is necessary, and we have worked hard at this. Some of the various kinds of affirmative action which are helping the company to achieve the kind of corporate climate it seeks are discussed below.

Union Relations: In 1938, Mr. Swope's statement of three years earlier was incorporated into the first agreement between the company and the United Electrical Workers. A similar non-discrimination clause was included in the first agreement between the company and the I.U.E. (CIO) in 1950. A similar statement now appears in agreements with more than one hundred other unions with which the company bargains.

Recruiting: Equal opportunity cannot simply be a matter of passive acceptance. In 1948, when Howard University in Washington became the first Negro school to earn accreditation by the Engineers Council on Professional Development, General Electric immediately sent its recruiters to the Howard campus—the first national firm to do so. Today, of course, we are but one of many national companies visiting Howard each year. In addition, our recruiters now visit eleven other predominately Negro colleges and the list grows each year. Furthermore, key General Electric personnel travel extensively to meet with Negro university leaders and participate constructively in their development programs.

Recruiting techniques, of course, can have a significant effect on the achievement of equal opportunity progress. To take a more current and popular example, a year ago the company was beginning to recruit about two hundred young men and women for good-paying assignments as guides and hostesses at our Progressland exhibit at the New York World's Fair. Consistent with company-wide practices, our Progressland managers rejected the idea of some arbitrary "ratio" of Negro participants. The establishment of some fixed ratio of Negro to white employees would conflict with the principle of hiring and advancement on the basis of qualification. Indeed, in some of our plants, the use of arbitrary ratios would probably inhibit the entry of qualified Negroes into industry. But simply to reject the idea of ratios is not enough. What was needed here (as in other locations in which we have had a relatively rapid build-up in employment) was affirmative action to make certain that numbers of qualified Negroes had the same opportunity to be considered as whites. The Progressland staff made the hiring procedures and qualifications known early to New York-area groups interested in equal job opportunity activities and to educational and civic leaders in predominantly Negro areas. As the result of this extra diligence we received applications from many qualified Negroes. Ultimately we were again accorded evidence that progress for General Electric means *human* progress no less than technical progress. One executive of the NAACP commented: "If we are able to encourage others to emulate your example, the World's Fair will truly be a peek into the future, a future full of more than just intangible dreams of equality."

And let me re-emphasize that this modest achievement was accomplished without resort to use of ratios or without compromising qualifications.

BEYOND OUR WALLS

Ultimately, even as we try conscientiously to assure fair and equal treatment for every job applicant and every employee, and as we try to assure that qualified Negroes are made aware of opportunities with General Electric, we are faced with the knottiest problem in the equal employment opportunity field: a disproportionately high number of Negro applicants simply do not measure up to the opportunities available. Most have not had what Lincoln called an "unfettered start." Those who do qualify often do so only after having overcome special, unusual barriers—economic, educational, psychological, social.

We know that an equal employment opportunity program cannot truly flourish while too many of the minority applicants are sorely disadvantaged, particularly in terms of education and training. We do, of course, have training courses for apprentices and dozens of courses aimed at encouraging all employees to upgrade their skills. Last year, for instance, about one in every eight employees participated in one of General Electric's educational programs. But such programs meet the need only within our walls.

We have had several well-meaning suggestions that we relax the qualifications a little for minority applicants. We do not believe that this is a useful solution. We would not be keeping faith with our customers, with our shareowners, or with our employees, white and Negro, each of whose jobs is dependent on the successful performance of all.

Once again, however, the alternative is to do something constructive. There are many examples:

Beginning in 1954 the company and the General Electric Foundation began support of the United Negro College Fund, representing thirty-two private Negro colleges and universities. Currently, for the period of 1964-67, a grant of $100,000 has been arranged in support of the Fund's special drive to broaden existing educational programs, reinforce teaching strengths, provide more student aid, and upgrade laboratories and other facilities.

Meanwhile at the high school level, General Electric is working in many cities with local educators to encourage careers in various skills required by the electrical industry and to combat the "dropout" problem.

For example, at the Benjamin Franklin High School in Philadelphia, where these is a substantial Negro enrollment, school officials have credited the work of people from the General Electric Missile and Space Division (many of them being Negroes) with a dramatic rise in numbers of student graduates and a correspondingly sharp decline in dropouts. Over a two-year period, Negro and white employee teams from the division—assemblers, engineers, secretaries, draftsmen—have spoken to more than 10,000 students in school assemblies and 15,000 more in individual career conferences in Philadelphia, in a public school system in which Negro enrollment is about 50 per cent.

In another plant-city, General Electric found that some teachers in the local public school system were encouraging Negro girls to concentrate on bookkeeping courses instead of stenography because they believed that secretarial jobs were closed to them. Later, when the girls did apply for secretarial tests, they often failed. General Electric, of course, tried to set the record straight not only on secretarial opportunities but on the other kinds of jobs for which we could foresee a demand.

Upgrading teaching skills is also important. Since 1945, General Electric and the General Electric Foundation have sponsored advanced, all-expense-paid courses for high school and college educators in cooperation with several leading colleges and universities.

Negro teachers have participated from the beginning. In 1963, for instance, eighteen of sixty high school teachers attending a six-week course at the University of Kentucky were Negroes—probably the highest percentage of Negroes ever enrolled in a given course in that institution.

Men and women who have left school often find they do not have skills for industry. A single company can properly help here, too. In Philadelphia, for instance, the Opportunities Industrialization Center, started less than two years ago by a local Negro minister, Rev. Leon Sullivan, has already attracted national attention for its success in training and placing unemployed or underemployed Negroes (and some whites). Local General Electric management was pleased to contribute financial and equipment support, along with others, and assistance in planning the curriculum.

Similarly, the Urban League across the country has been developing "skills banks" for the development and placement of Negroes. At the national level, Dr. G. Roy Fugal of General Electric, one of industry's most knowledgeable authorities in the equal employment opportunities field, has been working closely with such organizations as the League's Commerce and Industry Council. At the local level, the skills bank programs are receiving support of General Electric men in many of the communities in which the company has major facilities.

In New York City, General Electric joined with six other large employers and the National Urban League in sponsoring a secretarial training course, designed as a spring-board for minority group women seeking jobs with national corporations in the metropolitan area. This pilot course has been most successful and has encouraged similar approaches in other localities.

One of the problems which has come up again and again in discussions with educators whose student bodies include large numbers of Negroes is the lack of recognition of the real opportunities which are open in industry—not just General Electric, but industry as a whole—for qualified Negro applicants.

In the lower grades, this lack of recognition seems to be one of the factors which can breed apathy toward academic achievement. In college, it can predispose many competent young people to shy away from courses which would lead to careers in industry.

"It isn't enough for us to *tell* them about good job opportunities in industry," one of our recruiters was told last summer. "You have to *show* them."

As a result, we prepared an illustrated booklet, "At Work in Industry Today," covering case histories of 50 General Electric employees, all Negroes, who are building careers for themselves in a wide variety of jobs. Some are long-established employees with substantial records of advancement, others are apprentices or trainees. Some are managers, some are secretaries, some are factory workers, skilled and semi-skilled. They are working in engineering, in sales, in employee relations, in manufacturing, in finance. Some are high school and college graduates, others are school dropouts who have had to work extra-hard to overcome a lack of formal education.

We have distributed copies of the booklet to some sixty thousand guidance teachers and career counselors in schools throughout the country, and have made it available for use by various urban training centers and by other organizations, public and private, who are interested in upgrading the skills of Negroes. We hope it will help; it has already had some effects which we consider salutary. Two state governments have told us that they are seriously considering developing similar booklets on their own, with examples from their own states, and a number of other companies have expressed interest in preparing booklets drawing on examples peculiar to their own industries.

We have been considering here primarily the question of jobs: equal opportunity in employment, and in advancement, and beyond this the necessity to encourage the development of the skills and knowledge which make progress possible.

CONCLUDING REMARKS

The employment area is the one in which the American corporation has primary interest, if for no other reason than that American business needs all the skills it can obtain in these years of massive technological change and economic growth. We know that achievement of justice for each citizen does not rest solely on getting a good job, nor even on good education which will qualify him for a good job. None of us is simply an economic animal—much as the Marxists would have us believe it. Ours is a nation of the spirit, and our American economic system is meant to serve that quality. Many of our communities across the nation have problems which inhibit various minority groups from making the most of their American heritage. These problems warrant the attention of each of us as citizens.

Recently, Fred Borch made his first talk as president of General Electric to the administrative committee of a nationwide society of top-level General Electric managers and professional personnel.

He spoke as follows: "Most of you have heard that President Johnson recently appointed me a member of the National Citizens' Committee for Community Relations.

"One of the key roles which each member of the Committee has been asked to perform is: 'to emphasize the necessity of mobilizing all those forces available at the community level, which might be drawn on to create a climate for compliance....' Certainly, this is something constructive each of us can do within the communities in which we live—and I sincerely urge your participation as General Electric men and as citizens.

"The Civil Rights law is the law of the land, and we as good citizens should certainly do our full share in seeing that it becomes successful as an instrument for promoting social justice and equal opportunities for all Americans regardless of race, creed, or color.

"Don't underestimate the effect, good or bad, which each of you can create by the examples you set—or by the very things you say about these fundamental rights of others. In your service organizations and clubs in your hometown, in your boards of education, and in your town meetings, don't be afraid to stand up and be counted for the things that are positive and right. It doesn't take much courage or intelligence to be negative.

"All of us, working together, can make this a better America by helping to assure the legitimate rights of others. If, therefore, [you are] looking for ways to encourage [your associates] to render a real service to the country, you might want to raise the question as to whether [you] should consider some appropriate activities or projects on a voluntary basis. If we make contributions to human progress a primary criterion of every undertaking—in the investment of our own money and time on an individual basis, and in each business venture in General Electric—we will continue to broaden and strengthen our opportunities for growth and profit and service in the future through the good we do," said Mr. Borch. Knowing as I do the capabilities of the managers to whom this message was delivered and the numbers of communities in which they function, I cannot help but feel that their personal, individual efforts can have real impact.

These, then, are ways which one company has been trying to follow in the quest for true equal employment opportunity: the continued re-emphasis and implementation of our formal policy, and the effort both inside and outside the company to create a climate in which the words can become reality. We are going to have to continue to work on both fronts, with vigilance on the first and creativity on the second. We have no reason to be smug; even now, most probably, there are corners in our large decentralized company in which the cobwebs of old antagonisms still linger. But we are convinced that American industry can turn equal employment opportunity from a goal into an affirmative achievement—and that each individual company can help significantly by its own direct efforts.

PART IV

Union Policies and Programs for Equal Opportunity

11

UNION RACIAL PRACTICES*

Ray Marshall**

In discussing union racial practices, we shall emphasize racial exclusion from unions by formal and informal means, segregated local unions, discrimination in the building trades, and the ways unions influence economic opportunities of Negroes. Our discussion of union racial patterns will be followed by an analysis of some of the major factors changing those patterns.

Formal Exclusion

The number of national unions with formal racial restrictions has declined significantly in the last thirty years. In 1930, at least twenty-two unions formally barred Negroes from equal membership.[1] By 1943, mergers and changing racial practices had reduced the number of restrictive unions to about thirteen, seven of which were AFL affiliates (SNA, BRSC, IAM, MMP, RMA, WWPA, and the ORT).[2] In 1949 there were at least nine unions with formal race bars, two of which were members of the AFL (WWPA and ORT). The ORT removed its race bar in 1952, and the WWPA merged with the United Papermakers & Paperworkers. After the AFL-CIO merger in 1955 there would have been no major national affiliates with race bars if the BRT and the BLF had not been admitted to the merged federation. The BRT removed its race bar in 1960, leaving only the ORC, the BLE, and the BLF with formal restrictions. The BLF, the only one of these unions affiliated with the AFL-CIO,[3] removed its race bar in 1963.

The following forces caused unions to abandon exclusion by formal means or to adopt more subtle forms: expansion of Negro employment into jurisdictions covered by these unions, especially

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*Hearings before the Senate Subcommittee on Employment and Manpower of the Committee on Labor and Public Welfare, September 10, 1963, *Nation's Manpower Revolution,* pp. 1192-1202.

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during World War II; competition between unions for Negro votes in representation elections after the passage of the Railway Labor Act; the embarrassment of exclusionist union leaders at conventions and in the press by criticism from Negro and white union leaders; action by such governmental agencies as the wartime and state FEP committees, especially the creation of the New York State Commission Against Discrimination in 1946; and fear of the loss of exclusive bargaining rights, union shop provisions, or other legal privileges under the Railway Labor Act or the Taft-Hartley Act.[4]

Informal Exclusion

The decline in formal exclusion by international unions does not mean, however, that discrimination declined by the same degree because of local variations from official policies. Unions with formal race bars frequently have accepted Negro members, and the locals of some international unions with no formal bars, particularly in the building trades and on the railroads, have excluded Negroes by such informal means as agreements not to sponsor Negroes for membership; refusal to admit Negroes into apprenticeship programs; refusal to accept applicants from Negroes or simply ignoring their applications; general "understandings" to vote against Negroes if they were proposed (for example, three members of a BRT or BRSC lodge may bar an applicant for membership); using examinations to refuse Negro journeymen status which either were not given to whites or were rigged so that Negroes could not pass them; and by exerting political pressure on governmental licensing agencies to see to it that Negroes failed the tests. An examination of union racial practices in various building trades unions throws more light on this problem.

Building Trades

The pattern of racial exclusion in the building trades has been second only to the railroad industry in its rigidity.[5] The craft locals of the International Brotherhood of Electrical Workers (IBEW) and the Plumbers & Pipe Fitters (UA) have had an almost consistent pattern of discrimination throughout the United States, but the following other building trades unions are also prominent in the list of unions regularly charged with racial discrimination: Granite Workers, Flint Glass Workers, Structural Iron Workers, and Asbestos Workers. In addition, locals of the following organizations less frequently have been charged with discrimination by various civil rights organizations: Bricklayers, Masons & Plasterers (BMP); Plasterers & Cement Masons (PCM); United Brotherhood of Carpenters & Joiners (BCJ); International Union of Operating Engineers (IUOE); Lathers International Union; Painters, Decorators & Paperhangers (PDP); International Association of Sheet Metal Workers; and Elevator Constructors. Some of these latter unions, like the BMP, the PCM, and the Roofers are in occupations with relatively large Negro memberships, and the Bricklayers International Union seems consistently to have sought to abolish discriminatory practices — except segregated locals — whenever these have been brought to its attention. The unions in the so-called trowel trades and the Roofers have many Negro members in integrated or virtually all-Negro locals in the South, but there have been charges of segregation in the South and other forms of discrimination in many places in the non-South. Other organizations like the IUOE and the Teamsters have had reputations for barring Negroes in some places and accepting them in others.

International Unions

We should note the distinction between the policies of international unions and their locals. Both the Plumbers and the IBEW internationals have become concerned about the adverse publicity they are receiving, which has caused their actions to be carefully scrutinized by civil rights and government agencies and which threatens to jeopardize their control of the trades. The Plumbers established a committee in 1959 to study charges of racial discrimination against their locals throughout the United States, and in 1962 the international union included a nondiscrimination clause in its national agreement covering large contractors, which could be significant for some federal contractors. Similarly, the 1958 IBEW Convention adopted a resolution on civil rights, which resolved that it was the "enduring goal of our brotherhood to assure to all workers their full share in the benefits of union organization without regard to race, creed, color, or national origin."[6] In 1963, eighteen building trades internationals agreed to take more vigorous action to eliminate discrimination, and the powerful Brotherhood of Carpenters & Joiners adopted a nondiscrimination program, including the elimination of segregated locals. Moreover, building trades unions throughout the United States have recently responded to the widespread charges of discrimination against them by admitting some Negroes to membership. It remains to be seen, however, whether these equalitarian measures will produce significant changes in racial employment patterns.

Conclusions on Unions with Informal Exclusion

The evidence seems to support the following conclusions concerning unions that bar Negroes from membership by informal means:

1. Racial exclusion by informal means is not restricted to any particular geographic area. Though restriction is undoubtedly more rigid in the South, unions in the following trades probably have more Negro members in the South than some other places: the trowel trades, longshoremen, teamsters, roofers, hod carriers and common laborers, and hotel and restaurant employees. These trades have been practiced by Negroes in the South because they have been regarded as "Negro work" and because Negroes have sufficient supplies of labor to protect their interest and to protect their employers, who might be boycotted by whites. These occupations also are relatively old and have stable techniques, making it difficult for unions to exclude Negroes by monopolizing the latest technology.
2. While some craft unions have had egalitarian racial policies and some industrial union locals have refused to admit Negroes to membership, as a general rule the unions which practice exclusion are craft organizations. The members of craft locals have the ability to exclude Negroes from membership and from the trade if they can control the labor supply. Industrial unions, on the other hand, are forced to organize workers hired by the employer, while the craft unions determine in many cases whom he hires. In addition, craft unions at the local level consider it to their advantage to exclude workers, while industrial unions consider it to their advantage to organize extensively.
3. The foregoing factors are not, however, sufficient to identify the general character of excluding unions. Some other factors include the following: because of the egalitarian trend in race relations, those unions which are older, other things being equal, seem more likely to exclude than newer unions; in many cases the employer determines the hiring policy; whites are likely to attempt to exclude Negroes from certain status jobs like those of airline pilots, stock wranglers, locomotive engineers, white collar and supervisory jobs; and, in some cases, exclusion is directed against all except a particular nationality group. (It has been common practice in the building trades, for instance, for locals to be made up entirely of a particular nationality.)

Auxiliary and Segregated Locals

A number of international unions which did not bar Negroes from membership restricted them to auxiliary locals controlled entirely by whites; about the only thing Negro members of these locals were allowed to do was to pay dues.[7] Auxiliary locals were weakened by attacks from the wartime FEPC, court decisions which prohibited the closed shop where auxiliaries existed, NLRB decisions that the auxiliary could not be coupled with the checkoff of union dues, state FEP laws, the Taft-Hartley and Railway Labor Act amendments making the union shop unenforceable if all workers are not admitted on equal terms, and the Landrum-Griffin Act of 1959 which makes it possible for Negro employees to bring action to abolish auxiliary locals. A few auxiliary locals remained in 1959 but had become relatively unimportant by that date.

Segregated locals are theoretically different from auxiliary locals in that the Negro and white locals are equal and have separate charters.[8] This distinction sometimes is more theoretical than real, however, because the white local might in fact represent the Negro local in dealings with employers. We must note, though, that there are actually relatively few truly segregated locals in the sense of separate unions for Negroes and whites in the same plant or craft. A few unions almost invariably have had segregated locals in the South – the Carpenters, Longshoremen, the Paper Makers, the Pulp Sulphite Workers, the Brotherhood of Railway Clerks, the Tobacco Workers, and the Musicians – but industrial unions have very few – in 1959, the Textile Workers had about three and the OCAW, two (of 152 locals in the South). Even unions like the Tobacco Workers, with predominately Southern memberships have adopted a policy since 1946 of not forming segregated locals. Other unions, like the Bricklayers, have a relatively small number of segregated locals in the South; in 1959, 25 of that union's 168 Southern locals were segregated.

While it is extremely difficult to generalize about segregated locals, the writer's experiences suggest several broad conclusions:

1. Negroes in the South frequently favor a continuation of segregation because they would usually be in the minority and know that whites might discriminate against them;[9] Negroes have their own buildings and other property, as well as their own officers and representatives, and thus have a vested interest in perpetuating segregation;[10] some Negroes believe they can engage in nonunion matters of interest to Negroes better if they have their own locals.[11]

2. Whether or not Negroes oppose integregation depends partly upon the effects of segregation on their economic opportunities. Some unions, like the Bricklayers, Musicians, Longshoremen, Barbers, and others feel that their economic opportunities would not be improved if they integrated because they have protected territories.

In other cases, however, Negro workers are extremely unhappy with segregation because they are denied equal job opportunities. Almost everywhere, for instance, Negro Carpenters' locals in the South have virtually atrophied because they cannot get adequate job opportunities. The Painters have a number of segregated locals in the South and have had experience similar to the Carpenters. As noted above, however, the Carpenters adopted a policy in 1963 to merge these locals.

3. The ideological and philosophical positions of Negroes will also influence their attitude toward segregated locals. Some Negro leaders are opposed to segregation on principle and feel that the AFL-CIO should deliver an ultimatum to its segregated locals to integrate or be expelled. On the other hand, a majority of the Negro leaders in segregated unions in the South probably oppose integration. Younger Negro workers are more likely to insist on integration, but older leaders fear Negroes will suffer short-run losses from integration.

4. The proportions of Negroes in unions will influence the ability to merge segregated locals. If there are very few Negroes, whites will agree to merge, but if the Negroes are in the majority the whites will frequently oppose integration.

5. Negro resistance to integration has been reduced by special arrangements to make it possible for them to continue to have some control over their affairs when they integrate.

Finally, we may note the following developments concerning segregated unions in recent years:

(*a*) The practice of establishing segregated locals has been almost completely discontinued. Observers also detect tendencies for Negroes and whites to segregate themselves in union meetings less than they did twenty years ago. There are, moreover, increasing examples of integrated union social affairs in the South.

(*b*) A number of international unions have agreed to establish no more segregated unions (Painters; Tobacco Workers; Pulp, Sulphite, and Paper Mill Workers), and other organizations have taken measures to integrate segregated locals (International Ladies' Garment Workers, the National Association of Letter Carriers, the International Association of Machinists, the International Brotherhood of Teamsters, the American Federation of Musicians, the Carpenters, and the American Federation of Teachers). Most of the organizations with segregated locals in the South, however, have refused to integrate locals on the grounds of local autonomy, especially opposition by the colored members (Bricklayers, Longshoremen, Molders, Paper Makers, Railroad Clerks, Maintenance of Way Employees, Railway Carmen, Railway Trainmen).

(*c*) The AFL-CIO has taken a formal position against segregated locals but has refused to invoke sanctions or to establish a time by which segregated locals must integrate.

We should note, however, that to say a local is "integrated" might not mean very much. It could mean that one or two Negroes belong to the organization but never participate other than by paying dues. "Integration" might also mean that Negroes are members of the industrial union, but if they attend meetings they segregate themselves or are segregated by whites.

Control of Job Opportunities

Craft unions influence job opportunities for Negroes by controlling entry into the labor market through closed-union, closed-shop conditions, job referral systems, apprenticeship programs, and pressure on employers to hire or not to hire Negroes. Industrial unions affect job opportunities through control of hiring, transfer, promotion, and layoffs. Many employers are convinced that if they transfer Negroes into previously "white" occupations, the white workers will strike, and there is sufficient historical precedent to validate this belief, though it is rarely possible for a group of rank-and-filers to block the employment or upgrading of Negroes without the aid of either the employer or the international.

Finally, unions have positively influenced employment opportunities of minorities by promoting civil rights legislation, including nondiscrimination clauses in contracts and adoption of company-wide seniority agreements to make it possible for Negroes to break out of "Negro" jobs.

While our attention has been focused on problems of racial discrimination within unions, we have noted that unions also have contributed to the improvement of the Negro workers' position. In spite of these positive measures, however, racial discrimination is still a serious problem within the labor movement and probably cannot be solved by the unions themselves. This conclusion is based on the belief that those unions and leaders who want to change union racial practices do not have sufficient power to do so.[12]

SOME FACTORS INFLUENCING UNION RACIAL PRACTICES

Labor Market Factors

Technological change has an important effect on the employment opportunities of minorities, who are concentrated disproportionally in those jobs most likely to be replaced by innovations. Sometimes the job is abolished by the introduction of new machinery and at other times it is made more attractive; Negroes have been replaced in both cases.

Racial trouble has frequently started when unemployment rises and whites start moving into jobs held by Negroes or senior Negroes are laid off while junior whites are retained. Unionism, while not causing Negroes to have equal treatment, might make it possible for them to get the same treatment in layoffs as whites who have the same seniority because seniority clauses in union agreements give Negroes legal rights they would not have in the absence of unions.

Economic conditions also affect the pace at which Negroes can move up the economic ladder. If the labor market is slack and there are few opportunities for advancement, the results of changing the racial practices of unions and employers will be less significant. For instance, the effort exerted over a long period to change racial practices in the oil industry produced limited results because nontechnical employment in most companies declined after 1953, and few new employees have been hired or promoted. Though separate lines of progression were broken down in the major companies in this industry, only a few Negroes have moved into better jobs.

Negroes also have found that tight labor markets — such as exist during wars — make it easier for them to move into jobs from which they were previously excluded. It is true that Negroes generally have been the last to be committed to industrial employment during these times and have been more vulnerable than whites to retrenchment during recessions, but it is nevertheless significant that Negroes were able to enter some jobs for the first time during wars. Once in these jobs, Negroes were in a position to fight from within unions and companies to improve their positions. While many factors influence the employment opportunities of minorities, there is little doubt that antidiscrimination measures would be much more effective in a full employment atmosphere.

The ease or difficulty with which a trade may be learned and practiced is a significant consideration in changing union racial practices. If the trade is relatively easy to learn or Negroes can learn it in trade schools, the Armed Forces, or by picking it up, the union will have difficulty excluding Negroes or will be forced to lower its economic conditions. In the plumbing and electrical industries where apprenticeships are important, it is relatively difficult for Negroes to learn the trade because there are few colored craftsmen, and whites will rarely take Negro apprentices or trainees if the admission of Negroes is opposed by the union. Trades where Negroes have difficulty becoming journeymen because of union exclusion or governmental licensing arrangements will therefore not have many Negro trainees. One of the reasons Negro bricklayers, cement finishers, and plasterers have been able to perpetuate themselves in the South is that there are a sizable number of Negroes who will teach the trade to others. Moreover, the techniques used in these trades are relatively stable, so that new methods cannot be monopolized by whites to exclude Negroes. Negroes were also allowed to retain some jobs which were difficult to perform or had other undesirable features.

Another labor market factor perpetuating racial job patterns is the employer's preference for white or Negro labor. This preference is influenced by stereotypes as to whether or not Negroes can do certain kinds of work, have higher rates of turnover, are subject to more wage garnishments, and the like. Negroes have been preferred by white contractors in the South for certain jobs which colored workers have traditionally held — like those of longshoremen, hodcarriers, and cement finishers. Employers sometimes preferred Negroes for the same jobs held by whites because Negroes would work for lower wages. In the past, Negroes moved into some jobs during strikes because employers thought colored workers would not join unions, a degree of preference which was intensified by Negro leaders who felt that the colored worker's economic salvation lay in an alliance with employers against unions. Today, many of the strongest Negro community institutions favor unions and exert their influence to prevent Negroes from being used as strikebreakers. Employers no longer feel that they can count on Negroes to be non-union, and the general extension of unionism has made this attribute less important to the companies. Moreover, the virtual abolition of racial wage differentials for the same jobs has eliminated another reason why employers preferred Negroes.

Employers' preferences will also be affected by uncertainties as to the reaction of white workers and the supply of Negroes who possess the necessary skills if they are boycotted by white craftsmen. Whether or not whites boycott an employer depends upon the availability of jobs and general market conditions. Boycotts will rarely be initiated by whites in relatively stable industrial jobs; in construction work, on the other hand, it is a simple matter for workers to boycott a particular employer. In longshoring, Negroes can furnish enough workers to replace whites if the latter refuse to work with them, but there are not enough Negro electricians or plumbers to make this possible.

Supply of labor is related to the status of the job. In many cases, employers prefer Negroes because they are more easily controlled in low-status occupations. Since a sufficiently large supply of whites cannot be found for some of these jobs, employers prefer Negroes who are forced by occupational limitations into these lines.

The scope of collective bargaining is a factor influencing the union's ability to discriminate against minorities. Organizations which have purely local bargaining arrangements are more likely to discriminate than those that use national bargains, because the national union is usually more conspicuous, making it relatively easy to bring moral pressure to bear on it. There have been some widely publicized cases of racial discrimination by local unions, but as a rule locals are too insignificant to attract national attention. The widely publicized cases attract attention precisely because the locals are impervious to moral pressures, and there is usually no agency that can readily focus sufficient economic, physical, or political power on them to produce a change in their policies.

National bargains give the parent organization more power to deal with the local. Since nationals are more vulnerable to moral power, and since the prevailing moral sentiment in the United States is against discrimination, unions with national bargains will be more likely to cause their locals to conform with equalitarian racial policies.

The level of union wages in a plant covered by the national bargain influences the control that a national union can exert over its local affiliates. If union wages and conditions are much higher than prevailing wages in the local area, the international has more control over the local. In Memphis, for example, local white union members vigorously protested the United Automobile Workers' equalitarian policies, but segregationist elements did not secede from the international, partly because of national contracts and good wages and conditions. Some white members of the Memphis local considered pulling out of the international but were deterred by the realization that the international, not the local, was the certified bargaining agent.

Other factors which influence the international's ability to require its locals to observe equalitarian racial policies include the following: the effect of enforcement on the international's objectives as interpreted by its leaders and as it influences their official positions; whether the international has some reason to appeal to the Negro community, e.g., organizing a bloc of unorganized Negroes or Negro-labor political considerations; the available alternatives for the local, especially whether there is a rival union to which it can secede; the employers' attitude — the employer will be willing to cooperate with the international if he has some reason (government contracts, fear of boycotts) to oppose discrimination by the local; the size and political significance of the local involved; the dues structure and financial strength of the international and the constitutional provisions relating to the ownership of the local's property if it secedes; and the ease with which trusteeships can be imposed upon the local.

The Courts

There has been considerable legal activity in the past twenty years to define more clearly the duty of fair representation imposed on unions as a result of the privilege of exclusive bargaining rights granted by the Railway Labor and Wagner acts.[13] Under this duty, unions were required to represent all workers fairly, even though they were not required to admit them to membership. Some federal courts have also held that employers are jointly liable with unions for the duty of fair representation,[14] and aggrieved minorities have brought suit against unions for damage resulting from violation of their legal rights.[15]

Negroes also sought to use the theory of the school desegregation cases to eliminate discrimination by unions, but the Supreme Court's refusal in 1959 to grant *certiorari* in the *Oliphant* case would seem to perpetuate the doctrine that unions do not have to grant membership to all members of the bargaining unit in order to satisfy the duty of fair representation.[16] There is, however, a minority of legal opinion, which seems to be growing, that unions cannot represent workers fairly unless they admit all members of the bargaining units.[17]

Negroes have not been able to change union racial practices very much through the courts, however, because legal action is expensive, requires a great deal of time, is uncertain as to its outcome, and has rarely resulted in damages to the plaintiffs. However, lawsuits are valuable to aggrieved minorities as a threat to discriminating unions, and injunctions have been used to prevent unions from causing Negroes to lose their jobs.[18]

The NLRB

The disadvantages of court cases could be avoided if there were effective administrative remedies, but the National Labor Relations Board (NLRB) has been much more cautious than the courts in interpreting and applying its power to prevent discrimination by unions. Though the NLRB has entertained ". . . grave doubt whether a union which discriminatorily denies membership to employees on the basis of race, may, nevertheless, bargain as the exclusive representative in an appropriate unit composed of members of the excluded race,"[19] it repeatedly permitted unions which excluded Negroes to participate in elections covering bargaining units containing Negroes.[20] Indeed, the Board has ruled as follows:

"Neither exclusion from membership nor segregated membership per se represents evasion on the part of a labor organization of its statutory duty of 'equal representation.' But in each case where the issue is presented the Board will scrutinize the contract and conduct of a representative organization and withdraw certification if it finds the organization has discriminated against employees in the bargaining units through its membership restrictions or otherwise."[21]

Despite this threat, however, the NLRB has never actually revoked certification of a union for racial discrimination, though some unions have surrendered certification, apparently to avoid action by the Board.[22] It must be conceded, however, that the basic reason for the NLRB's past refusal to deal more directly with racial discrimination has been the repeated refusal of Congress to give the Board explicit authority to deal with racial matters.

While it is too early for an evaluation, the NLRB is showing belated signs of taking more direct action against discriminatory unions. The Board has not gone as far as the courts in enforcing the duty of fair representation, but there is some indication that it might respond to President Kennedy's increased interest in equal rights for Negroes by decertifying discriminating unions. In a recent case, for instance, a trial examiner recommended that the certification of an independent union in Houston be revoked because "where a union segregates members or excludes or denies full membership status to applicants, on racial grounds, it is violating its duty of fair representation to all members of the unit and should not be permitted to hold a certified status."[23] The Board has given some indication of the trend in its thinking by ruling that it will not permit an existing discriminatory contract to bar a representation election.[24]

It is, however, not clear whether decertification would have a significant impact on union racial practices. While unions appear to be greatly concerned about decertification, it is not necessary for a union to be certified in order to bargain with employers. Indeed, many craft unions have sufficient economic power to operate without certification. It is not clear whether these unions have the duty of equal representation if they are not certified. It could be, therefore, that in the absence of federal contracts or a state or federal fair employment practices (FEP) law, there are no legal remedies to prevent discrimination by strong craft unions, who are the ones most guilty of discrimination. Even where legal remedies exist, however, Negroes have not been satisfied with the extent to which they have been able to enter many craft unions and occupations. This is perhaps one of the reasons, as in the 1963 Philadelphia and New York examples, that civil rights organizations have resorted to mass demonstrations to get Negroes hired and to focus attention on the discriminating unions. Most of these demonstrations have been in states with FEP laws.

Government Contract Committees

While the various contract committees set up by the federal government since President Roosevelt appointed the wartime Fair Employment Practices Committee have not dealt directly with unions, they have had indirect effects on their racial practices. In the petroleum, pulp and paper, aircraft, and other industries in the South, for example, Negroes have changed union practices by threatening employers with the loss of federal contracts. In these industries, there has been some desegregation of seniority rosters controlled jointly by the unions and employers, especially since 1953. As a general rule, however, President Eisenhower's Committee on Government Contracts (PCGC) had a very limited impact on unions because it adopted the policy that unions were not parties to government contracts and were therefore beyond its control. Moreover, the PCGC's power was limited by the executive order which established it. In spite of these limitations, however, the PCGC was used by groups like the NAACP to promote equal job opportunities for Negroes.

President Kennedy's Committee on Equal Employment Opportunity (PCEEO), not only has more power than the PCGC, but also is directed to "cause any labor union . . . who is or may be engaged in work under Government contracts to cooperate with and to comply in the implementation of, the purposes of the order." Moreover, unions covering 90 per cent of the AFL-CIO's membership have signed voluntary pledges to comply with the provisions of the executive order. As a result of the PCEEO's activity, a number of unions have integrated their locals in the South and some jobs have been integrated, particularly at the important Lockheed aircraft plant in Marietta, Ga., where the International Association of Machinists has bargaining rights. In June, 1963, President Kennedy met with a group of labor leaders and got them to pledge their support to eliminate discrimination in their ranks as well as in the larger community. It remains to be seen, of course, whether the unions can implement these pledges.

State FEP Committees

Some of the most intransigent cases brought before the state FEP commissions, and usually the first cases to go to public hearing or the courts, have involved unions. It is not entirely paradoxical, of course, that unions have been the chief supporters of FEP legislation and have been among the most intransigent respondents before the commissions established by these laws, because there are many different kinds of unions and union members. Moreover, unions sometimes find it easier to support general civil rights legislation than to solve their own racial problems. In fact, George Meany, president of the AFL-CIO, advocates a federal FEP law partly on the grounds that such legislation is needed to help overcome union discrimination.

The FEP commissions have succeeded in changing the formal racial practices of a number of unions, particularly on the railroads, and have succeeded in directly obtaining the admission of hundreds of workers who were formerly excluded from membership in labor organizations. Moreover, the commissions have aided in the regularization of many job referral systems, making it more difficult for these to be used as vehicles for discrimination. Though it would be impossible to establish statistically, the commissions undoubtedly have also been indirectly responsible for gaining more equal opportunities for thousands of Negroes not directly involved in these cases. The FEP laws also have been used by some union leaders as justification for equalitarian changes that were not considered politically feasible before the laws were passed.

In spite of these positive accomplishments, however, the evidence suggests that the commissions have not changed the basic employment patterns in most unionized industries, and the 1963 racial demonstrations against unions in FEP cities and states suggest that Negro leaders are far from satisfied with the results of these laws. There are many reasons for the commissions' failures to achieve faster results, including the following: (*a*) The commissions use essentially the same tactics against unions as against employers; namely, conciliation, persuasion, and the threat of public hearing, though it is generally conceded that recalcitrant local unions are less responsive to these tactics than employers. (*b*) The commission's operations are complicated by such factors as internal union politics, nepotism, amicism, the natural intractability of employment patterns, declining economic opportunities in many industries where Negroes are concentrated or where they are attempting to get jobs, the natural slowness of the case method in proving racial discrimination, the fewness of verifiable complaints against unions in most states, the complicated hiring arrangements which make it difficult to prove discrimination in many casual occupations, and the autonomy of discriminating local unions.

Any effort to change union racial practices must be based on an understanding of union structures because power is transmitted to decisionmakers through these structures. Public policy must be sure that the right kind of power is applied to those parts of the labor movement responsible for discrimination. The real problem of racial discrimination is usually at the local level and whether or not locals will take corrective action depends upon the extent to which they may be compelled to do so by parent internationals or outside pressures. Generally, local unions seem to be relatively impervious to moral pressures but are more responsive to economic pressures. There are a number of cases (in Cleveland, Washington, D.C., Milwaukee, Hartford, San Francisco, Los Angeles, and other places) in which local unions have defied the most vigorous public and official denunciations of their practices but have yielded to economic pressures. The *Hartford* case, for example, involving an IBEW local, was resolved, after the local defied the state commission on civil rights, when the superior court found it guilty of contempt for refusing to admit Negroes to membership and fined it $2,000 and $500 for each week it remained in contempt.[25] Building trades unions in Philadelphia were impervious to vigorous public attacks on them but admitted five Negroes to membership after Negroes exerted direct pressures through mass demonstrations. IBEW Local 26 in Washington, D.C., resisted vigorous moral pressures to get Negroes in the union but finally relented in 1963 and accepted two Negro apprentices.

These and other experiences suggest that recalcitrant local unions will change their practices when their power sources are threatened by government regulation, retaliation from the Negro community, and alienation of public opinion. If the trends continue, these unions face the following possibilities: decertification by the NLRB; loss of control over state and municipal licensing provisions where these are used for racial discrimination; loss of control over hiring and referral systems; loss of control over appenticeship training; and being barred from federal, state, and municipal work.

Negro and Civil Rights Organizations

Another important factor influencing union racial practices has been the organization of Negro workers to promote equalitarian measures in unions. Indeed, changes in discriminatory union practices have rarely come about in the absence of organized pressures.

Within the labor movement, A. Philip Randolph, AFL-CIO vice-president and president of the Brotherhood of Sleeping Car Porters, has formed many organizations since the 1920's to fight for equal treatment of Negroes. The latest of these organizations is the Negro-American Labor Council, formed in 1960. Negroes have also organized caucuses within unions to promote their objectives. Outside civil rights organizations, especially the National Association for the Advancement of Colored People and the National Urban League, have been very important in helping Negro unionists organize, seeking the passage of legislation, financing court actions, and making public declarations. Other groups seeking to achieve equal treatment of Negroes within unions include such organizations as the civil rights committees formed in several unions and the AFL-CIO, the Jewish Labor Committee, and the Association of Catholic Trade Unionists.

CONCLUSIONS

We may conclude by noting some of the main changes in union racial practices in the last thirty years.

(1) The number of international unions with formal racial bars has declined from at least twenty-two in 1930 to two major unions today, and none of these is affiliated with the AFL-CIO. Moreover, informal exclusion has declined considerably, and recently some of the most intransigent craft locals have accepted Negro members for the first time.

(2) Negro union membership has increased from about 56,000 in 1930 to between 1.5 and 2 million today.

(3) The AFL-CIO has adopted a stronger equalitarian racial position than either the AFL or the CIO, though the federation really has little other than moral power to enforce its policies against offending locals. While implementation of the federation's racial policies has been impeded by difficulties within the federation and its civil rights committee and department, there is evidence that the AFL-CIO is moving with increasing vigor to abolish discrimination in its ranks; the external pressures being exerted on the labor movement by civil rights organizations have strengthened the federation in its dealings with its affiliates.

(4) Negroes occupy official positions within the labor movement. Two Negroes were elected to the AFL-CIO Executive Council, though one of these (Willard Townsend) died and was not replaced by a Negro. At least seventeen international unions have or have

had Negro vice-presidents or executive board members.[26] There are also many Negroes in positions of responsibility within local unions.

(5) The level of the debate over union racial policies has changed in the past thirty years. Thirty years ago discrimination was defined largely in terms of unions which would not admit Negroes to membership and the prevalence of racial wage differentials. Where Negroes were admitted, it was commonly to auxiliary locals. Today, the racial wage differential has almost disappeared in jobs covered by union contracts, and auxiliary locals are almost nonexistent. The main areas of conflict today involve the exclusion of Negroes from some craft locals, abolition of segregated seniority rosters, the election of Negroes to international executive boards, and overcoming Negro and white opposition to the desegregation of local unions. While many building trades and railroad locals continue to exclude Negroes from membership, and Negroes continue to be concentrated in the lowest job categories, segregated seniority rosters have been changed considerably in many industries. Moreover, while segregated locals exist in all sections of the country, it is rare to learn of the establishment of new segregated locals, and several international unions are taking measures to abolish Negro locals where they exist.

(6) Thirty years ago, Negro leaders frequently encouraged colored workers to act as strikebreakers. Today, in spite of the growing public split between the Negro community and the labor movement, many Negro organizations remain pro-union, and Negro strike-breakers are rarely heard of. Moreover, Negro-labor political alliances continue to be important forces in most industrial cities.

(7) A considerable body of law has been developed in union racial practices, and a number of organizations have evolved to which aggrieved workers can take charges of discrimination against unions. Indeed, one reason union racial practices have not been changed more than they have is the paucity of verifiable charges filed with these agencies.

There is ample evidence of discrimination against Negroes by unions, but it would be false to allege either that there has not been a significant lowering of racial barriers in unions in the past thirty years, or that the union movement has not made significant contributions to the Negro's welfare.

FOOTNOTES

1. The following unions are known to have had formal race bars in 1930: Brotherhood of Railway Carmen — AFL (BRC); Switchmen's Union of North America — AFL (SNA); Brotherhood of Railway & Steamship Clerks — AFL (BRSC); the Order of Sleeping Car Conductors — AFL; Masters, Mates & Pilots of North America — AFL (MMP); Railway Mail Association — AFL (RMA); Wire Weavers Protective Association — AFL (WWPA); Commercial Telegraphers — AFL; Boilermakers — AFL; International Association of Machinists — AFL (IAM); the Order of Railway Telegraphers — AFL (ORT); the Brotherhood of Dining Car Conductors; the American Federation of Railway Workers; Brotherhood of Railway Station Employees & Clerks (BRSEC); American Train Dispatchers Association; Railroad Yard Masters of North America; Neptune Association; Brotherhood of Locomotive Engineers (BLE); Brotherhood of Locomotive Firemen and Enginemen (BLF); Brotherhood of Railway Conductors; the Brotherhood of Railroad Trainmen (BRT); and the Railroad Yard Masters of America.
2. See *ibid.* for names of these unions.
3. BLE constitution of June-July, 1956 as amended in September, 1960. Sec. 28. BLF constitution, July-August, 1959 as amended Jan. 8, 1960.
4. See, for example, *James* v. *Marinship,* 25 California 2d 721 (1944).
5. See, for example, speech delivered by George Meany to the Sixth National Legislative Conference of the Building & Construction Trades Department of the AFL–CIO, Washington, D.C., March 14, 1960; New York State Commission Against Discrimination, "Apprentices, Skilled Craftsmen, and the Negro; An Analysis," 1960; Ben D. Segal, "The Practices of Craft Unions in Washington, D.C., With Respect to Minority Groups," in *Civil Rights in the Nation's Capital* (Washington: National Association of Intergroup Relations Officials, November, 1959), p. 35; Memo to the writer from David Sawyer, executive director of the Commissions' Council on Human Relations, Washington, D.C., June 3, 1959; Herman D. Bloch, "Craft Unions A Link in the Circle of Negro Discrimination," *Phylon,* Fourth Quarter, 1958; "Craft Unions and the Negro in Historical Perspective," *Journal of Negro History,* January, 1958; Herbert Northrup, *Organized Labor and the Negro* (New York: Harpers, 1943), Ch. II; National Planning Association, Committee on the South, *Negro Employment in the South* (New York, 1955), *passim;* Herbert Hill, "Organized Labor and the Negro Wage Earner," *New Politics,* Winter, 1962; *Idem,* "Labor Unions and the Negro," *Commentary,* December, 1959; National Urban League, "Negroes and the Building Trades Unions" (New York: National Urban League, Industrial Relations Department, mimeo, nd.).
6. National and local craft unions have different interests with respect to organizing; nationals gain power by expansion while locals gain power by exclusion and controlling the supply of labor.

7. This arrangement was usually adopted in lieu of outright exclusion by formal means and was sometimes the next stage adopted in a union's racial practices following the elimination of formal racial restrictions. Organizations which followed this practice included the Brotherhood of Railroad Carmen, the Blacksmiths, the Boilermakers, the Motion Picture Operators, the National Rural Letter Carriers, the National Federation of Rural Letter Carriers, the Maintenance of Way Employees, the Sheet Metal Workers Alliance, the Brotherhood of Railway Clerks, the American Federation of Railroad Workers, the Rural Letter Carriers Association, the International Association of Machinists, and the Seafarers International Union. All of these organizations except the American Federation of Railroad Workers and the Rural Letter Carriers Association were affiliated with the AFL.
8. The following international unions have or have had segregated locals: Brotherhood of Maintenance of Way Employees (BMWE); Brotherhood of Painters, Decorators, and Paperhangers of America (BPDP); Brotherhood of Railway Carmen of America (BRC); Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express, and Station Employees (BRSC); International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers, and Helpers (IBBS); International Union of Pulp, Sulphite, and Paper Mill Workers (PPS); Sheet Metal Workers International Association (SM W); United Brotherhood of Carpenters and Joiners of America (UBCJ); United Brotherhood of Paper Makers and Paperworkers (UPP); the National Federation of Rural Letter Carriers (Independent); American Federation of Musicians (AFM); National Association of Letter Carriers (NALC); International Association of Machinists (IAM); Tobacco Workers International Union (TWIU); the Bricklayers, Masons, and Plasterers (BMP); the Journeyman Barbers International Union; the Oil, Chemical, and Atomic Workers (OCAW); the Textile Workers Union; the United Textile Workers; the International Longshoremen's Association; the Molders; the Glass and Ceramic Workers; the Amalgamated Clothing Workers; International Brotherhood of Teamsters; and International Ladies' Garment Workers Union.
9. For instance, in 1954, OWIU Locals 23 (white) and 254 (Negro) decided to merge after legal action to integrate seniority rosters. When the committees merged, the bargaining committee was elected by majority vote, and comprised entirely of whites, who then negotiated a discriminatory contract. The Negroes split with the whites again and brought legal action against the company and the white union.
10. This is a common problem encountered by the AFM, for instance, in its efforts to merge segregated locals throughout the United States. When this question was raised at the AFM's 1957 convention, there were 47 Negro locals with 7,620 members, only 14 of which were in the South. When a vote was taken on this matter, 40 of the Negro locals opposed the merger, five favored it, and two did not vote.
11. In New Orleans, for instance, ILA Local 1419 (Negro) owns several

business establishments and operates a political organization which conducts a school to teach Negroes how to register and vote. Negro leaders oppose integration with the white general longshore union because, they argue, it would be more difficult to continue these activities on behalf of their race.

12. See Ray Marshall, "Some Factors Influencing Union Racial Practices," *Industrial Relations Research Association Annual Proceedings,* 1961.
13. *Steele* v. *L. & N.R.R.,* 323 U.S. 192; Archibald Cox, "The Duty of Fair Representation," *Villanova Law Review,* January, 1957, p. 151; Benjamin Aaron, "Some Aspects of the Union's Duty of Fair Representation," *Ohio State Law Journal,* Winter, 1961, p. 39; *Wallace Corp.* v. *NLRB,* 323 U.S. 248.
14. *Central of Georgia Ry.* v. *Jones,* 229 F. 2d 648, cert. denied, 352 U.S. 848; *Richardson* v. *Texas & New Orleans Ry. Co.,* 242 F. 2d 230; 77 S. Ct. 230.
15. *Syres* v. *Oil Workers,* 257 F. 2d 479, 330 U.S. 892; *Rolax* v. *Atlantic Coast Line,* 186 F. 2d 473.
16. 262 F. 2d 349 (1948), cert. denied, 359 and 935 (1959).
17. See *Betts* v. *Easley,* 161 Kansas 459; Justice Murphy's concurring opinion in the *Steele* case, 65 S. Ct. 226; Judge Groner's concurrence in *Brotherhood* v. *United Transport Service Employees,* 136 F. 2d 817, 829 (CADC), reversed on other grounds, 320 U.S. 715, and Justice Fairchild's dissent in *Ross* v. *Ebert,* 275 Wes. 532, 82 N.W. 2d 315, 320.
18. See *Hunter* v. *Atcheson, Topeka and Santa Fe Ry.,* II Race Relations Law Reporter, 996.
19. *Bethlehem Alameda Shipyard Cases,* R–5963–94 (1943).
20. Carter Manufacturing Co., 50 NLRB 803.
21. NLRB, Tenth Annual Report, 1945, p. 18.
22. Larus & Bros., 62 NLRB 1085; also case No. 39–RC–854 (1955).
23. Independent Metal Workers Union and Hughes Tool Co., case No. 23–CB–429; United Steelworkers & Independent Metal Workers, case No. 23–RC–1748, Feb. 26, 1963, p. 12.
24. *Pioneer Bus Co.* v. *Transport Workers,* 51 LRRM 1546.
25. See 18 *Conn. Supplement,* 125-127; *Conn. Law Journal,* Oct. 7, 1952; p. 2; *IBEW Local 35* v. *Commission on Civil Rights,* Conn. Supreme Ct. of Errors, October term, 1953; and *IBEW* v. *Commission on Civil Rights,* Superior Ct., Hartford County, Conn. Mar. 26, 1954.
26. International Longshoremen's Association; Allied Industrial Workers; Hotel & Restaurant Employees; National Agricultural Workers; United Rubber Workers; Mine, Mill & Smelter Workers; United Packinghouse Workers; Tobacco Workers; Hod Carriers & Common Laborers; Oil, Chemical & Atomic Workers; National Maritime Union; Brotherhood of Sleeping Car Porters; United Transport Service Employees; the American Federation of Teachers; Retail, Wholesale & Department Store Union; the Amalgamated Meat Cutters & Butcher Workmen; and the United Automobile Workers.

12

HUMAN RIGHTS AND THE LABOR MOVEMENT

James H. Jones*

I am a firm believer that where labor and management alike, together or separately, state *clearly* and *positively* their positions on non-discrimination and equal opportunity and then plan, program, and effect a method of implementation so that all employees, union and non-union, will know in no uncertain terms that they mean what they say, this is the most important aspect of *Real Assumption of Responsibility*. This term, which I use frequently, is very high in priority of importance as it applies to organized labor. Labor has more than a legal responsibility to fight for equal opportunity and non-discrimination for all people regardless of race, creed, or color. Labor's foundation, its aspirations for a better way of life for all people, has a great moral responsibility it must assume if it is to be true to its own well-stated set of principles.

In my capacity as chairman of the Philadelphia Council, AFL-CIO's Human Rights Committee, I am at times one of labor's severest critics. This committee is a large one representing all segments of the labor movement who are truly dedicated people and who believe in what we are doing and trying to do in seeing to it that labor unions carry out national AFL-CIO policies.

THE PHILADELPHIA AFL-CIO HUMAN RIGHTS COMMITTEE

Some two years ago, it was labor's own human rights committee that issued a public exposé and denunciation of "certain building trades local unions," one of the "all-Negro local unions affiliated with Movie Operator and Theatrical Employees International Union," and one of the "all-Negro locals of the American Federation of Musicians."

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This was done as a last resort because of our inability to get these particular building trades unions to open up their apprenticeship training programs to all qualified applicants irrespective of their race, creed, or color. It was also our finding that most of these unions had no Negro members and they could not, or would not, defend their policies nor would they meet with our committee so it could assist them in making whatever changes were necessary to comply with AFL-CIO policy.

The two all-Negro locals, for reasons only their leadership were aware of, and against the recommendation of their international union, refused to merge with their larger white counterparts. It was brought out by testimony at many hearings conducted by our committee that all job protection and seniority of the Negro members would be guaranteed. It was also found that the Movie Operators Local 307-A (Negro) was used by the movie house owners to cut rates of the industry, and it was admitted that they did take a movie away from the larger Local 307 (white) after an ultimatum by an owner to Local 307 (white) that "if you won't take what I'm offering I'll go to the Negro local," and he did. The Negro local's members are working for much lower hourly rates—some as much as $1.00 per hour lower—I am told.

We honestly believed these two mergers were in line with our policy to also eliminate segregation and the image of old-time all-colored and all-white—especially when the opposition to the merger was the Negro leadership. I have gone into more detail with these two local unions because of the importance the racial aspect could have on our overall program.

It should also be stated that there are other building trades locals that have exemplary records of equal opportunity; outstanding are the Carpenters locals, the Laborers locals, and others. Many outstanding improvements have been made by the building trades locals and they have established a human rights committee of their own which has agreed to work with our committee. The chairman of their committee is Joseph Burke of the Sheet Metal Workers, who is a highly respected labor leader. His local union has since eliminated the father and son requirement of the apprenticeship training program, and they now have their first Negro apprentice and more on the list.

I make these observations because *I am* one of labor's severest critics, and I make the following statement that I am also one of organized labor's greatest boosters, because no group in America has contributed more to the advancement of the principle of equality for all men, irrespective of race, creed, color, or national origin.

Yes, I am proud of the AFL-CIO and its reiteration of its policy and the expanding of the national AFL-CIO Civil Rights Committee under the directorship of Donald Slaiman. Don Slaiman is a truly dedicated person and no other action by President Meany could be more meaningful than the appointment of Don and giving more assistance to the committee to prove that the AFL-CIO means business.

SPECIFIC CASE STUDIES

I serve on the international union's civil rights committee and also on a four-man panel which includes the present Supreme Court Justice Arthur Goldberg, Roy Wilkins of the national NAACP, and Frank Shane, Executive Secretary of the Steelworkers' Civil Rights Committee. Its main job is to handle complaints from various NAACP local branches that cannot be resolved locally. While the specific case I would like to discuss does not involve this committee, it does involve specific action taken by me on behalf of my union, the United Steelworkers of America.

The Case of the Negro Brakeman

The case in point occurred at a basic steel plant owned by the United States Steel Corporation. It involved promotion of a Negro brakeman who had twenty-six years of seniority in his job and who had, over the years, trained a large number of engineers to run the engine. When the trainees (all white) were fully qualified under his instructions and guidance, he fell back to his job as brakeman. The case was finally decided by the company's finally giving in to the man's grievance, which was forcefully processed by the union, and the man in question filled a vacancy as an engineer in the all-white train crew.

I would like to make it clear that the company really wanted to make this move, which was long overdue, but it was afraid a strike would take place if it did. There is no condoning their lack of a positive position over the years and even when confronted with the union's strong and affirmative action and its own real and honest desire to do the right thing, they were still afraid of the consequences.

When the time came for the Negro employee to take out his first engine, the train crew (not all engineers—mostly engine repairmen) went on strike. These men were also members of the union. When this happened, to my surprise the company was willing to give up its sacred "company's prerogative" and called me to ask what they should do. Having negotiated many contracts with all companies insisting on their managerial rights to run their plant, and while agreeing with them (with minor reservations that we see to it that they ran it right, at this late date I was not going to assume any of their responsibilities, and told them so. In my role of seeing that they did run it right, I made a suggestion to the company—not very technical or statistical, but just a "wee bit" practical, and it was as follows: looking at the clock in the plant superintendent's office, I said, "If I were you I would tell them (the strikers) that if they are not back on the job in ten minutes, instead of one Negro engineer, all jobs would be filled by Negroes." I am proud to say that the company gave such an order, in such a manner indicating they meant business, and when eight minutes had passed, every one was back on the job, and production was resumed in full. That night, which was stormy (weatherwise also), the Negro engineer had brake trouble, and one of the leaders of the strike was the first to volunteer to help and did so. This proved that positive action on the part of both the union and the company made this plant one of the most integrated basic steel plants in its chain. The future plans and programs, jointly shared, worked so well, and the Negro workers, who were attending alternate day and night vocational and remedial schools, became so qualified that we had to slow the company down in certain jobs so as not to create a reverse problem.

The Case of the Printing Industries

Now I would like to explain another situation that involved the printing industries in Philadelphia, our AFL-CIO Human Rights Committee, and a representative of the Typographical Union.

Having seen the bad publicity and image given the building trades unions because of a few locals, there was a sincere desire on our part to see what could be done in the printing industries on a voluntary basis. There were some cases filed with the Philadelphia Human Relations Commission. The AFL-CIO Human Rights Committee and the commission had a signed formal agreement (the first of its kind in the country) to work cooperatively to resolve cases involving any AFL-CIO union, so we were actually in the process of handling these cases through the representatives of the industries.

All parties concerned had a desire to establish a broader participating committee which would also include some civil rights groups. An exploratory meeting was held with the following participating: the printing industries represented by the then Executive Director, John Seybold, and Personnel Manager, Malcolm Pritzger, representatives of the labor unions involved, our AFL-CIO Committee, the Urban League, Council for Equal Job Opportunity, an agency of the Philadelphia Fellowship Commission, the Philadelphia Human Relations Commission, and the Negro Trade Union Leadership Council of Philadelphia, on which I also serve as president. Many hard-working meetings followed in our efforts to draw up a real set of rules and regulations that would help to speed up integration in some areas and a beginning in others. Actual participation by many company personnel and managerial representatives gave us all the ingredients necessary for success if men of good will have honest desires to do so. I can honestly say that the agreement finally arrived at and the subsequent good results obtained therefrom are a real credit to everyone concerned and especially the representatives of the Printing Pressmen's Union, who were real solid men when the chips were down.

Our agreement with the printing industries and the organizations listed above has been hailed by the public press all over the country as a real breakthrough of great proportions. I am proud of our efforts, and it proves again that the voluntary approach can accomplish good results.

CONCLUDING REMARKS

In all of my speeches, no matter where or how large the audience, I am always compelled to speak proudly of two unions in particular, the International Ladies Garment Workers Joint Board and local unions, and the Amalgamated Clothing Workers Union Joint Board, all of the Philadelphia area. These unions have many minority group members, and they have their own directors of education, and with the weight of their joint board managers behind them they plan programs to effectively implement their policy of fair and equal treatment for all. They have classes that teach potential operators of the many machines and also classes in languages for the many foreign-born members. These continuous activities by the unions are in reality an expression of their desire to assume their responsibilities not only to their membership but also to the community as a whole.

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INCREASING EMPLOYMENT OPPORTUNITY IN THE PRINTING AND ELECTRICAL TRADES

Theodore W. Kheel*

Few aspects of the Negro movement for equal rights and opportunities during the 1960's have won more notoriety in the press and other news media than alleged racial discrimination in the American union movement, particularly among the craft unions. This notoriety may seem to some appropriate and deserved when they read or hear such distressing statistics as these:

— Negroes comprise only 15 of every 1,000 electricians in the U.S. and 33 of every 1,000 plumbers and pipefitters.

— Of 5,658 skilled workers employed on major federal construction projects, a 1963 survey showed 300 were Negroes, a ratio of 1 in 19.

— Among 65 major industrial corporations under Plans for Progress, Negroes filled about 2½ per cent of the skilled craft jobs.

JOB OPPORTUNITIES AND THE CRAFT UNIONS

Under such circumstances — and there is a seemingly endless list of comparable figures available in the literature of the Negro protest — it is hardly surprising that national and local civil rights groups have selected craft unions, usually in the building trades, as prime recipients of demands for greater job opportunities for minorities. It is time, however, to view this issue in perspective, free of the emotionalism which has inspired furious verbal attacks and occasional violence between civil rights advocates and trade unionists, who are normally valuable allies in worthy social and political movements. We have delayed too long in evaluating the causes of some of these restrictive patterns. Upon analysis, it is fair to conclude that the exclusion of Negroes in certain trades, among them the electrical and printing trades, is not the sole or principal product of racial discrimination as such, by unions or by employers. In thus isolating the basis upon which denial of job opportunity has rested, we acquire a sense of direction in moving to enlarge it.

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*Mr. Kheel, as Director of the Office of Impartial Review of the New York City Electrical Industry and Impartial Arbitrator of the Joint Board of the New York City Printing Industry, has drawn primarily upon the New York City experience in preparing this paper.

The Father-Son Tradition

One general practice among craft unions which has clearly served to restrict opportunities for Negroes and other minorities is the "father-son" tradition of perpetuating a particular skill among members of a family unit from one generation to the next. Obviously, a union which has no Negro members, and has never admitted Negro members, effectively blocks, by this practice, an aspiring Negro youth from access to the higher-paying jobs in its jurisdiction and its craft. This is undoubtedly legally indefensible under federal and state antidiscrimination laws. But we must not assume that such "favoritism," whether legally or even morally wrong, is necessarily discriminatory. Nor, for that matter, is it confined to craft unions. Thomas Watson and Henry Ford are able and successful executives. It does not in any way diminish their achievements to suggest that they were, at the least, aided by their kinship to their successful predecessors in the company. Not only does the tradition have its origins in the medieval guilds antedating the discovery of America, but similar nepotism goes unchallenged in the professions, in finance, industry, and politics. Patterns of exclusion have also resulted from a continuing clannishness among ethnic groups which migrated in the nineteenth century; there are union locals which for decades have selected their apprentices primarily from youth of Irish extraction, Polish locals which have excluded Italian-Americans, and so on.

The Economic Structure of the Industry

The economic structure of an industry also tends to affect the admission practices of its trade unions. The printing trades, particularly, are concerned with the introduction of automated devices, as we have seen and soon may see again, in the bargaining between Local 6 of the International Typographical Union and the New York City newspapers. The construction industry is subject, far more than others, to the boom-and-bust cycle in the long run, as well as to seasonal variations in employment. By the nature of the industry, the building trades unions tend to hold the advantage in the bargaining relationship and to control hiring. In their economic self interest — which, of course, is the motivation for the organization of a union in the first place — the printing and building trades locals tend to restrict membership both in periods of prosperity, since a shortage of skilled labor enhances their bargaining power, and in slack periods, since then they must divide the available jobs among their own.

"Discrimination by Default"

To the extent the Negro, the Puerto Rican, and the Mexican-American have been victimized by racial or ethnic discrimination in gaining employment opportunity in the building and printing trades, the blame for part of this discrimination rests with all of white America, not just with the union movement. We have effectively denied to the vast majority of these minority groups adequate educational opportunity to qualify, and the motivation to apply, for these highly skilled jobs. Since access to such jobs comes largely through the ancient apprentice system, the craft unions and their leadership are chargeable with "discrimination by default" — with the failure to seek out and recruit potential apprentices among the minority community, the failure to employ objective standards in the selection of apprentices, the failure to maintain adequate liaison with public vocational schools and state employment services, and the failure to publicize apprenticeship openings on a wide scale.

The fair employment title of the Civil Rights Act of 1964 offers one remedy for this form of discrimination. But it operates upon the basis of individual complaints, as do most state FEPC laws — which have not been notably effective in removing apprenticeship barriers. Certainly in the near future we must look to aggressive voluntary action by unions and employees in their joint apprenticeship committees for major breakthroughs in the electrical, printing, and other skilled trades. The experience of these two industries in New York City is particularly enlightening.

LOCAL 3, IBEW, APPRENTICESHIP PROGRAM

In 1962, New York City Local 3 of the International Brotherhood of Electrical Workers dramatically dispelled the myth that qualified Negro applicants for apprenticeship could not be found. As part of the agreement by which the union won a 25-hour work week, 1,000 additional apprenticeships were provided. The Joint

Industry Board dispatched 2,000 letters recruiting applicants for apprenticeships to the NAACP, the Urban League, the Negro American Labor Council, vocational high schools, the 450 employers with contracts with Local 3, the City Central Labor Council, the Puerto Rican Labor Office, the Committee on Inter-Group Relations, and nearly 120 other locals in the building trades. The board made it clear that it wanted qualified applicants for apprenticeships regardless of race, creed, or color. More than 1,500 applications were filed with a three-man screening committee consisting of Dean Harry Carman of Columbia University and two board representatives, one of them a Negro. The screening committee interviewed 1,100 applicants. Of the 1,020 apprentices chosen, 200 were Negro and Puerto Rican applicants. This result has repeatedly been singled out by commentators in the field – and hailed by the United States Commission on Civil Rights – as a major breakthrough in equal opportunity in apprenticeship training. Not every building trade local in every community can provide such a substantial number of new apprenticeships, and the employment picture in the New York electrical industry is perhaps unique: an existing construction boom and the precedent-making five-hour day enabled the industry to absorb a first-year apprentice class approximately equal in size to all the older classes combined. Obviously such a massive forward stride is not possible in every city, but it does underscore the direct connection between job availability and successful integration. Local 3 and the New York electrical contractors have also proved that vigorous affirmative action can produce substantial gains for minorities among apprenticeships when they do become available.

APPRENTICESHIP PROGRAMS IN THE PRINTING INDUSTRY

The Joint Printing Industry in New York City, which includes commercial printing establishments but not members of the Newspapers Publishers Association, faced a different problem in its apprenticeship selection procedure. The industry's 1963 contract with Local 6 of the ITU anticipated by several months enactment of a state law requiring objective standards in the selection of apprentices under any state-registered program. Prior to this contract, apprentice compositors were chosen on the basis of their seniority as "miscellaneous helpers" in the industry. This system, involving a delay of several years even in the right to apply for apprenticeship, had the effect of discouraging some of the outstanding younger workers from remaining in the printing trade. In order to remedy this situation, as well as to guarantee a fair selection process, the printing companies and the union agreed in the 1963 contract (1) that there would be no discrimination in the employment of apprentices, who would be "selected on the basis of qualifications and aptitudes in accordance with test procedures . . . and without regard to race, creed, color, sex, or national origin"; (2) that apprentice opportunities and selection procedures would be publicized; and (3) that annual examinations would be conducted beginning in October, 1964. The employers and the union agreed to a testing procedure to be carried out by impartial agencies and provided that any complaint of discrimination in apprentice selection be heard before an impartial arbitrator.

Among the 1,000 helpers eligible for the 1964 tests were approximately 300 Negro and Puerto Rican employees, so the problem was not one of inadequate representation of minority groups. Rather it was a question of assuring that the tests did not unfairly penalize minority youths, whose deficiencies in educational opportunity—whose "cultural lag"—might render them unduly vulnerable to standard testing procedure. Their basic aptitude and experience in the trade might well be ignored if the tests imposed reflected solely their educational background and achievement. No one seems yet to have devised a testing procedure that will absolutely compensate for this cultural lag, but the Joint Board of the Printing Industry—by leaving the actual testing to outside agencies and by suggesting a procedure giving maximum weight to the applicant's experience in the trade and his potential—has moved as far as now seems possible to secure an objective selection process.

The procedure devised was as follows:

All applicants were required to take the General Aptitude Test Battery for the printing trade devised by the United States Employment Service. Each applicant was also given an intensive interview with an employment service counselor to determine whether he might have a substantial potential in the trade regardless of his ability to meet the minimum standards in the test battery. Any applicant who either passed the test or was given a favorable recommendation by the counselor on the basis of the personal interview remained in the "pool" from which apprentices were to be chosen. The next hurdle for the remaining applicants was a test to measure their minimal verbal skills; applicants who passed the reading and either the grammar or spelling test remained in contention. The final series of tests covered their performance in arithmetical reasoning and trade knowledge, and the grades on these two tests, when combined with certain service and experience credits provided in the collective bargaining agreement, were used to determine the rank of the various applicants. Under the collective bargaining agreement, appointments as apprentices were to be made from among the highest scorers determined as outlined above.

CONCLUDING REMARKS

It is, of course, a truism of the issue of greater job opportunity for the Negro and other impoverished minorities that the problem cannot be analyzed and resolved except in the context of future employment trends. Continuing economic growth and an effective national response to automation and other technological changes are essential to any meaningful improvement in their economic status. As Secretary of Labor Wirtz has suggested, we do not want to pull down the "White Only Need Apply" signs and have them replaced by "No Help Wanted" posters. Nevertheless, the experience of the New York electrical and printing trades makes clear that, within the framework of the present economy, a determined program by management and organized labor can bring remarkable progress toward equal job opportunity without outside pressure, whether by governmental fiat or by picket lines and other demonstrations.

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NEGRO EMPLOYMENT IN THE CONSTRUCTION INDUSTRY

by

Joseph B. Meranze*

In order to understand the problem of Negro integration in the construction industry, it is necessary to view it in its proper context. Failure to do so makes the solution more difficult, and also engenders a sense of frustration at the slowness of the process of resolution. There is no disagreement over the conclusion that the Negro must be fully integrated in the construction industry. The only question is when will it be accomplished.

The acceptance of certain basic facts will help place the situation in its proper perspective. These are (a) the complete integration of Negroes in the construction industry will still provide them with relatively few jobs; (b) there are presently limited numbers of Negroes, if any, who are qualified by training or experience to be employed in certain crafts; and (c) there are only six crafts in Philadelphia out of thirty-seven that have been charged with racial discrimination.

HISTORICAL

The background of the crafts will also help explain some of the difficulties experienced by Negroes in being admitted as members. Philip Taft, in his recent book, *Organized Labor in American History,* points out that the building crafts were among the first and best organized labor groups in this country. They understood the natural tendency of disintegration better than other labor groups. This was because of the cohesiveness of their members.

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They were workers who had acquired special skills through long periods of apprenticeship training. Through this same process they had also acquired a fierce loyalty to their craft. They were zealous in preserving their group identity and resisting the admission of newcomers. They limited new members to sons and brothers, or others of the immediate family. This policy of selective admission led to the exclusion not only of Negroes, but all others not already represented in the group.

Despite this centralism, however, the national leaders of AFL, beginning with Samuel Gompers, its first president, were firmly against discrimination in the labor movement. They looked with disfavor upon trade unions having constitutional provisions excluding membership because of race or color. They fought to eliminate these restrictions. The issue was complicated, however, by the national scope of the labor movement. The Southern branches, with strong race prejudices, sought to prevent the eradication of these restrictions as the price for continued affiliation. The autonomy of internationals also presented an effective barrier to the federation's pressures for a non-discriminatory policy.

The influx of the Negro to the Northern industrial areas did not wholly help to resolve these difficulties and, indeed, created new problems. Coming from an agricultural background in the South, some carried with them the hostility of their Southern white neighbors towards labor unions. Because their financial resources were small, they were more easily intimidated by anti-union employers. The solidarity of organized labor in the North was threatened by the employment of large numbers of Negro strikebreakers.

The events called for greater efforts to organize the Negro. The leadership of A. Philip Randolph, first organizer and President of the Brotherhood of Sleeping Car Porters, added impetus to the drive by this minority against discrimination. Randolph became the leading trade spokesman for the Negro worker.

The formation of the CIO brought to the forefront of the movement a national labor organization which rejected from the start any kind of discrimination. It was made up of constituent internationals which had no racial problems. Its members were not skilled workers and accordingly long apprenticeships were not necessary. The membership consisted of mass-production workers, a large number of whom were Negroes and already employed. There were few locals in the CIO with the restrictive features characteristic of the crafts.

The forthright position of the CIO and the affirmative stand of the AFL leadership set the pattern against discrimination. The uniting of the AFL-CIO under the forceful leadership of George

Meany pointed up the determination of the labor movement to eliminate all racial discrimination. The National Negro American Labor Council and the Negro Trade Union Leadership Council in Philadelphia, labor groups organized and led by Negroes, were ultimately welcomed by the labor movement as allies in the goal for integration.

The elimination of restrictive membership requirements is not easy. Modifying practices of long duration will require perseverance and patient efforts. Those in the rank and file who continue to reflect environmental prejudices must be re-educated to a new way of life and thinking.

PRESSURES TO ELIMINATE RACIAL DISCRIMINATION

It can stand repetition to say that the Negroes' right to equal job opportunities in the crafts is unquestioned and long overdue. Historic steps to this end, in addition to those already mentioned, are in operation. It is these we now propose to discuss.

The Taft-Hartley Act and the NLRB

The *first* is that of the Taft-Hartley Act of 1947. The National Labor Relations Board, operating under the act, recently decided a significant case in the field of discrimination. This was the Hughes Tool Company decision involving an independent metal workers union in Texas. (147 NLRB No. 166, 56 LRRM 1289 (July 1, 1964)). In this case, the union maintained two locals. One was all white (Local No. 1) and the other all Negro (Local No. 2). The collective agreement with the employer covered the two locals and set up two levels of employment: one for only the white workers and the other for only the Negro members. Local No. 2 requested the elimination of this grouping of work force and an end of discrimination.. Local No. 1 refused. Three apprentice jobs became open but were made available to the white category only. A Negro bid for one of the jobs and was rejected because of his race. The grievance raised by the rejected worker was not acted upon by the union. An unfair labor practice charge was then filed with the Labor Board against the union and the employer.

The Labor Board found that the union had violated the act in discriminating against the Negro worker because of race and causing the employer to discriminate for the same reason. The Board's remedy included rescinding the representation certification issued by the union; directing the union to desist from discriminating against Negro members because of race, color, or union membership, to process the grievance of the Negro worker, and terminate the discriminatory provisions of its collective agreement with the employer based on race, color, or union membership.

The implications of this decision are significant. It makes it a statutory duty of a union to represent all employees in the bargaining unit without discrimination. A contract containing such discriminatory provisions will not only *not* be enforced but will not be considered a bar to an outside union asking for a representation election of the workers in the unit. The Board will refuse to certify a labor organization as the bargaining representative of workers when it is guilty of such discrimination.

Robert L. Carter, General Counsel for the NAACP, hailed this decision as an important breakthrough in labor law against racial discrimination. He felt that enforcement of racial equality through the Labor Board is easier, less costly, and more widely applicable than the fair employment provisions of the Civil Rights Act. He stated that three other cases of the Hughes Tool Company type are in process before the Board, and he plans to press more complaints of a similar nature in the future.

The Civil Rights Act of 1964

The *second* area of pressure to eliminate racial discrimination is the Civil Rights Act of 1964, signed by President Johnson on July 2, 1964. Title VII, "Equal Employment Opportunities," becomes effective July 2, 1965. It provides for the elimination of discrimination in employment because of race, color, religion, sex, or national origin in all industries affecting commerce. It is directed against employers, employment agencies, and labor organizations. It concerns itself with the terms, conditions, compensation, and privileges of employment. Particularly with respect to unions, the act prohibits discrimination in the admission of members. Title VII is enforced by a five-member Equal Employment Opportunity Commission. The commission interprets but may not sue against discriminatory practices. This is left to the individual grievant. The commission, however, may bring contempt proceedings to enforce a court's order. The Attorney General may bring injunctive action if he has cause to believe there is a pattern or practice of resistance to the law.

Where there is a state FEPC, the federal procedure yields to the state agency for 60 days, or 120 days if the state agency is in its first year of operation. Federal agencies can make agreements with state agencies for all or part of the enforcement functions. There are twenty-five states that have FEPC laws.

To assist in the effective operation of the Civil Rights Act, the AFL-CIO met on September 22, 1964, in Washington, D.C. It approved the recommendation that all collective agreements have non-discriminatory clauses. It agreed to provide educational material for the union members on the terms of the act. It urged the government to provide adequate funds to enforce the law.

President George Meany outlined plans for union action to bring about peaceful voluntary compliance with the Title VII by labor organizations. He told the conference that showing the unorganized workers of the unions' concern for their welfare "could have a bearing on our organizing efforts."

The federation literature to be distributed will include "Civil Rights—Fact or Fiction." It points out some of the fictions being manufactured to defeat the operation of Title VII. One of these fictions is the rumor that the law requires a fixed quota of Negroes even if it means discharging incumbent whites.

The internationals are requested to appoint a staff man to work with the AFL-CIO in developing community programs and to assume responsibility for pushing civil rights programs among their locals.

The State Agency

The *third* area of pressure is that of the state agency. In Pennsylvania there is the Pennsylvania Human Relations Act. (Act of October 27, 1955, amended in 1961). The act prohibits discrimination in employment because of race, color, religion, ancestry, age, or national origin. Like the Civil Rights Act, it is directed at employers, employment agencies, and labor unions. The Pennsylvania act prohibits printing any literature or applications indicating a preference in one of the above areas of discrimination. It prohibits interference where non-discrimination is in effect.

A Human Relations Commission consisting of eleven members is established. Harry Boyer, President of the state AFL-CIO Federation, is chairman of the commission. It has power to investigate and pass upon complaints. It can hold hearings to determine the existence of discrimination and enforce its order through the courts. Penalties are provided of contempt and fines.

The Building Trades Council of Philadelphia is working closely with the Pennsylvania Human Relations Commission. The Building Trades Council has set up its own Civil Rights Committee, chaired by Joseph Burke of the Sheet Metal Workers Local in Philadelphia. The Building Trades Committee on December 12, 1963, entered into an agreement with the state commission to effectuate integration in the crafts and apprentice programs without discrimination with respect to race, religion, or national origin. This affects the five-county area surrounding Philadelphia. The crafts agree to accept as applicants for admission to membership any qualified craftsmen or journeymen in the construction industry without discrimination. It will permit qualified and impartial observers selected by the commission to be present at examinations given by the crafts to determine qualifications. It was also agreed that there would be no denial of qualified applicants for apprentice programs because of race, etc. The commission reserves the right to refer applicants for enrollment. More than 50 per cent of the craft locals have executed the agreement to date.

Philadelphia Human Relations Commission

The *fourth* area of pressure is the Philadelphia Human Relations Commission. The commission was set up under the Philadelphia Home Rule Charter of 1951. The charter authorizes the commission to investigate, hold public hearings, and seek enforcement of its findings. The city also approved a fair practices ordinance on June 10, 1963. This prohibits discrimination in employment, housing, and public accommodations. With respect to employment, it covers the same area as does the state FEPC Act. It gives the Philadelphia Human Relations Commission authority to enforce it. The Philadelphia Human Relations Commission consists of nine members. Its chairwoman is Mrs. Sadie T. M. Alexander, a veteran fighter for racial equality.

In May, 1963, the commission cited six craft unions and four contractors in the construction industry for policies and practices which it charged led to the exclusion of non-whites from membership and employment opportunity. This pattern of exclusion resulted, it stated, from selection, training, and other factors incidental to job placement.

The commission, however, made some other significant findings. On the Municipal Service Administration Building, which was then being erected, there were 65 per cent nonwhites being employed among the laborers, carpenters, cement finishers, dock builders, and rod setters employed. There was no specific individual discrimination found. Moreover, after extensive efforts and announcements through the press, radio, television, and mail, and direct contacts with interested persons and agencies, only 300 applicants registered for employment in the construction industry. Of this number only 10 per cent were able to qualify either as journeymen or apprentices. It also pointed out, however, that there were 13,000 fewer jobs in the construction industry because of automation, prefabrication, and other labor savings devices in the past eight years; that because contractors have large permanent work forces which they shift from job to job, there are fewer job opportunities for new workers; and that the unemployment rate is high in several of the cited crafts.

The commission further reported in April, 1964 that the six cited craft locals have agreed to admit qualified non-whites to membership when members are being accepted; that they will administer objective tests for admission to apprentice training, and will refer qualified non-white workers to employers on a non-discriminatory basis where union hiring-hall contract provisions prevail. Three of these locals have now admitted Negroes to membership as journeymen, and four of them have accepted Negroes in their apprentice training programs. Two of these locals have not taken in nonwhite journeymen or apprentices because qualified Negroes are not available.

The Philadelphia AFL-CIO Council has appointed a human rights committee with James H. Jones of the Steelworkers Union as chairman. Mr. Jones is also president of the Philadelphia Negro Trade Union Leadership Council already mentioned. The human rights committee was instrumental in August, 1963, in bringing together the Graphic Arts Unions and the printing industries of Philadelphia in an agreement to eliminate discrimination in their trade. They set forth in their Memorandum of Understanding a program to achieve this objective. Implementing this agreement, in October, 1964, the Cuneo Eastern Press, Inc. signed with its craft unions to eliminate racial discrimination in its shop, and provision was made for the inclusion of Negroes in the apprentice program.

CONCLUDING REMARKS

It is evident from what has been said that active steps in many areas are being taken to achieve Negro integration in the construction industry. It is to be noted that agencies of the labor movement at every level are actively engaged to this end. The equal determination of labor and the Negro worker will bring the results both desire. It should not be forgotten that the just demands of the

Negro can be secured with greater ease through the labor movement. The Negro needs the labor movement to assure him a living wage. The labor movement needs the Negro worker because he is an integral part of the labor market. Neither can afford to ignore the other.

What should be done to further these efforts? There must be programs initiated to train the partially trained so they can qualify for apprentice and journeymen examinations. The Negro leadership must organize self-help programs such as the training project of the Reverend Leon Sullivan. It is receiving support from many sections of the Philadelphia community. Despite the short period of its existence, it is now considered a successful project.

The Philadelphia Public School System must increase its apprentice training programs to encourage more Negro applicants. The Board of Education in September, 1963, approved seven out of eight construction craft apprentice training programs as being nondiscriminatory. An eighth is being revised to meet this requirement.

The developing picture is an optimistic one. Numerous agencies, public and private, inside of labor and outside, are working to resolve a recognized problem. Through such united efforts, the common objective will be achieved.

PART V

Community Approaches to Equal Employment Opportunity

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A SURVEY OF EMPLOYER ASSOCIATION ACTIVITIES IN THE CIVIL RIGHTS MOVEMENT

Richard L. Rowan*

The major emphasis of this symposium has been to highlight the approaches to the job problems of Negroes by business people, trade unions, the community, and the government. Outstanding examples have been presented to show the results of action-oriented programs initiated by various groups interested in providing equal employment opportunities for all citizens. Business people, as well as others, have spoken with great clarity about their individual and company efforts to eliminate discrimination in employment. In order to understand better how businessmen act collectively in regard to the problems discussed herein, a survey was conducted among Chamber of Commerce associations. On a random basis, several Chambers in the East, the South, and Midwest were contacted and asked to furnish any information that would reveal their respective work in the area of race relations and employment. The following presents the findings with some comparison and analysis of the various approaches that were discovered.

THE FINDINGS

The South

Atlanta, Georgia. The Atlanta Chamber of Commerce has not completed a study of segregation and economic development. "This organization has been active in the field of human relations since 1960. We have nothing resembling a finished study." As far as can be determined, the Atlanta Chamber does have an interest in the field, but no clear plan of action appears to have been developed. "We proceed from day to day, doing the best we know how, in good faith and in good conscience."[1]

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Birmingham, Alabama. The Birmingham Chamber has not been very active in the area under consideration. "The Birmingham Chamber of Commerce has not made a study concerning community relations."[2]

Shortly before the passage of the Civil Rights Act of 1964, the Birmingham Chamber of Commerce sent a letter to members enclosing a memorandum pertaining to various aspects of the law. The memorandum advised that

> The clear choice of a policy of compliance or non-compliance belongs to each affected person or business. The clear danger . . . is in having no plan at all and to be confronted by one individual, or a crowd of undisciplined individuals determined to test compliance or non-compliance on their own or at radical instigation.
>
> Each person or business must assess or evaluate the effect of having no decisive plan, or the effect of a decision for compliance, or non-compliance upon his own custom or trade. Each must decide whether or not it may be useful to advise local law enforcement agencies of his decision, whatever it may be.
>
> . . .
>
> In Birmingham, if an establishment chooses to comply with the Act, it will be protected from disorder while it follows its own decision. The same rule will be applied in Birmingham when and if management declines to comply, subject to possible injunctive court action.[3]

In a Chamber "Preliminary Report of the Current Economic Conditions of Metropolitan Birmingham, Alabama," the following conclusion was reached:

> Apparently the massive assaults by civil rights opportunists during this year of 1963 have not materially affected Birmingham's sound economy.[4]

Charlotte, North Carolina. A rather active role has been assumed by the Charlotte Chamber in the city's efforts to remove racial barriers. In cooperation with the city, the Chamber "did encourage the operators of public facilities to integrate as soon as they could . . . and this has been done. . . . all of our public facilities — schools, parks, theatres, restaurants, cafeterias, hotels, motels — are integrated without regard to race, color, or creed." The Chamber has not concerned itself with the field of race relations except in the way described above. Employment has not been considered an appropriate area for their involvement. "The Charlotte Chamber of Commerce is not engaged in the field of Negro employment."[5]

Leadership in the mayor's office in Charlotte has contributed to the progress made in that city in race relations. Even though the central problem of employment has not been dealt with extensively, Charlotte has moved ahead in a quiet, orderly fashion to take down racial barriers.[6] The steps that have been taken can be traced in large measure to the excellent attitude and leadership of the present mayor. "I am most pleased to tell you . . . that Charlotte has moved voluntarily without duress or pressure to preserve racial harmony by correcting inequities of the past, dropping the bar of discrimination throughout our city, adopting merit employment in both government and private enterprises, and in other ways extending full citizenship rights and opportunities to all of our citizens."[7]

Columbia, South Carolina. The Chamber of Columbia has taken some measures in the past few years, and it appears that there is some understanding of the need for improved job opportunities in that community. "Our Chamber of Commerce, along with a committee of general citizens, has been studying the racial situation comprehensively for at least two years. We are making every effort to improve job opportunities, educational systems, and interrelationships between the races."[8]

The Chamber does not have a written report of its work in this area with the exception of official minutes of meetings.

Jackson, Mississippi. There has been no work done by the Jackson Chamber of Commerce in this field.[9]

Miami, Florida. The Miami-Dade County Chamber of Commerce has not made a study of segregation and economic development, but it has assisted in forming the Community Relations Board of Dade County, which has concentrated on three areas:

(1) "To organize itself formally into a functioning agency; (2) the handling of incidents of an emergency nature and a broader investigation of racial discrimination in the community; and (3) to measure the racial tensions which exist in this community."[10] The board is a relatively new organization, and the future will determine its effectiveness. Current attitudes seem to be indicative of progress. "The Community Relations Board of Dade County believes that racial discrimination in all its forms should be ended. If a public accommodations law is needed to end racial discrimination, such a law should be county-wide in its enforcement powers, instead of limited to a single community."[11] The experience in Miami has been a good one, and it is worthy of further study in order to show the effectiveness of a Chamber group in assisting in

the formation of bi-racial committees or community relations boards.[12]

Nashville, Tennessee. The experience of the Nashville Chamber of Commerce has been limited in this field, and it "has not conducted any studies pertaining to the general area of segregation and economic development in the South."[13]

The Mayor of Nashville appointed a Metropolitan Human Relations Committee in May, 1963. This group was created at the suggestion of the Nashville Chamber of Commerce and leaders in the Negro community. The committee was created "in furtherance of a public policy designed, a. to advance human rights, b. to anticipate and seek to eliminate problems in our community due to racial, religious, national, and cultural differences, c. thus achieving racial goodwill and friendly associations."[14]

The committee has had good results in its efforts to commit hotels and motels, restaurants, drugstores, hospitals, and public recreational facilities to a policy of non-discrimination. The committee reports that some progress has been made in the crucial area of employment. Employment "is an extremely broad field and presents diverse problems which vary with the size and type of the business involved, the number of employees, the skills required and many other factors. Therefore, conditions in this area are not readily subject to accurate generalizations. The Committee can report . . . that as of November 1, 1963, in addition to those large manufacturing concerns, utilities and some retail stores, which desegregated their employment practices some time ago, a similar policy is not in effect in the large insurance companies, the banks, and a great number of the downtown retail establishments. As regards the latter group it is significant to note that on October 16, 1963 the Board of Directors of the Nashville Retail Merchants Association formally approved a policy favoring impartial employment practices for all citizens regardless of race."[15]

New Orleans, Lousiana. The New Orleans Chamber of Commerce has not conducted "any studies relative to [the] area of interest."[16]

The East

Baltimore, Maryland. The Baltimore Association of Commerce does not have an active committee within its organization to work in the area of race relations, but it has been responsible indirectly and under the leadership of Herbert G. Bailey, Jr., Executive Vice-President of the association, for the establishment of a group outside its organization that has taken constructive action. The biracial group, known as the Voluntary Council on Equal Opportunity, Inc., consists of nineteen top Baltimore businessmen. Discussions are held on ways to improve job opportunities for Negroes. One council member said: "If a Negro doesn't have a job, if he doesn't have that ballast, all of the other things he wants are just candy puffs off in the distance."[17]

A monograph entitled *The Equal Opportunity Employer* was prepared by the council for distribution to business people and other interested groups. Its stated purpose was "to provide help to employers concerned about making job opportunities available for all, regardless of race, color or creed" and "to assure greater use of aptitude and skills among members of the Negro community, though some of the information is applicable in eliminating any form of employment discrimination." The monograph contains information relevant to the following: "Examination of Equal Employment Policies," "Establishment of Equal Opportunity Policies," "In-Plant Indoctrination," "Hiring Negro Employees," and "Understanding the Negro Community."[18]

Boston, Massachusetts. The Greater Boston Chamber of Commerce has been very active in the field of equal employment opportunity. The Ad-Hoc Committee on Racial Issues, consisting of five men, has been instrumental in developing programs in the employment area. This committee played a major role in formulating the Massachusetts Plan for Equal Employment Opportunity. In addition to this activity, the Chamber sent a staff member to Philadelphia to study its job training program. Also the Chamber's Personnel Managers Club devoted its November, 1963 meeting to the topic "The Negro in the Employment Market." The president of the Chamber has been appointed chairman of the Boston Committee on Youth Employment.

The Massachusetts Plan for Equal Employment Opportunity, mentioned above, has been supported by the Chamber. It is similar to the President's Plan for Progress, but it is administered and serviced by trade associations. The purpose of the plan is as follows:

> The Plan is designed to eliminate the historic economic gap between Negroes and whites through a voluntary, active program undertaken by a company to promote equal opportunities for qualified job applicants.[19]

Administration of the plan is carried out in several steps: (1) a company is contacted by the Chamber to see if it desires to participate; (2) if the company wishes to participate, it enters into a rigorous examination of employment and promotional policies and a policy statement is prepared on equal employment opportunity;

(3) the company is expected to develop a program of implementation of the policy set forth; (4) upon completion of the company's application, it is sent to the Chamber Advisory Committee on Equal Employment Opportunity, and, if approved as read, it is forwarded to the Governor's Committee on Industry, Finance and Commerce; and (5) when the Governor's Committee approves the application, the company is notified by letter by the Governor, who extends congratulations and explains the nature of the obligations involved.

At the present time, over twenty-five companies participate in the plan with ten of them coming through the Chamber's efforts. The Chamber stands firmly behind the plan – "Equal opportunity is good business; it is also right."[20]

New York. The New York Chamber of Commerce has not published any detailed studies relevant to the job problems of Negroes and community relations, although committees have studied the problems during the past two years. One of the studies made during the summer of 1963 by the Committee on Law Reform presents a review of racial tensions in New York State, with reference to New York civil rights legislation. Several observations made in the report highlight the need for emphasis on employment problems and the establishment of bi-racial committees to seek solutions. The report states:

> Negro leaders almost certainly realize the effective limits and diminishing returns of governmental action in New York State. It is for this reason that Negro demands in New York have been addressed not to the legislature but to community associations, labor unions and business organizations throughout the state. It is for this reason that the business community, whether it wills it or not, must bear a large share of the burden of Negro demands in New York. It is best able to take the responsibility for improving job opportunities at both lower and higher management levels. It can best organize and administer job training programs designed to qualify Negroes for better jobs. The business community can set the tone and style of a new acceptance of the Negro on all levels of life.[21]

On the subject of bi-racial committees, the report finds that they "should be non-political in character and essentially representative of the whole business community. Pending the completion by the Chamber of further studies already undertaken, we doubt the wisdom of the Chamber initiating the creation of such a committee. We strongly recommend, however, that if such a committee is formed the Chamber give active support to its work."[22]

Rochester, New York. The Rochester Chamber has not undertaken any particular studies, but it is presently planning to perform activities "in the area of employment of all groups in our area."[23]

Wilmington, Delaware. The Wilmington State Chamber of Commerce has not "conducted or initiated any studies in the general areas of civil rights and Negro employment."[24]

The Midwest

Chicago, Illinois. Activity in the area of equal employment opportunity at the Chicago Association of Commerce and Industry has been conducted by a committee known as the Committee for Full Employment. The committee, consisting of approximately 150 members, is broken down into six sub-committees charged with varying responsibilities: Survey Sub-Committee (design, distribution, tabulation, and summary of the Survey of Chicago Area Employers); Study and Analysis Sub-Committee (publication of a placement manual designed to aid employers); Publications Sub-Committee (wrote, edited, designed, and published the *Merit Employment Manual*); Placement Sub-Committee (designed and circulated among the members of the Chicago Association of Commerce and Industry a flyer asking them to designate one or more of nine different agencies training or placing people for jobs and in jobs with which they would ccoperate); New Enterprises Subcommittee (in close cooperation with the area's leading department stores, housing and shopping center developers, this subcommittee is in the process of actually forming a new enterprise: money has been subscribed for the operation of a contractual household cleaning service); and Training and Education Sub-Committee (attempts to obtain and provide information in order that a better utilization of manpower can be made).

Even though the various sub-committees have been in operation for only a little over one year, they have made important accomplishments such as publishing a merit employment manual; establishing a "clean home" service that employs relief recipients as workers; conducting a survey of employers; and publishing a directory of training and placement agencies in the Chicago area. At the present time, the association is setting up several individual industry meetings in order to provide a look at future job opportunities in the Chicago area.[25]

Cincinnati, Ohio. Ohio has a fair employment practice statute, and there are official and unofficial groups in Cincinnati that are working in the field of Negro employment. For these reasons, the Cincinnati Chamber "has not instituted a program in this field." It does "not wish to overlap the efforts of those already under way."[26]

Cleveland, Ohio. The Cleveland Chamber of Commerce has given support to groups outside the Chamber that have met to discuss problems in the areas of education, employment, and housing. Conferences have been held under the general direction of the chairman of the Chamber, but participating members have been drawn partly from outside the organization. Emphasis has been placed on keeping the meetings unpublicized with the feeling that this contributes to the success of the operation.[27]

Indianapolis, Indiana. The Indianapolis Chamber of Commerce has had an informal program wherein "group meetings of employers as well as much personal work" have been carried out. In addition to this activity, the Chamber has encouraged Indianapolis employers to provide employment and promotion on a merit basis without regard to race. This work has been supplemented by participating in work supported by the United Fund agencies known as Merit Employment and Flanner House.[28]

St. Louis, Missouri. The Chamber of Commerce of Metropolitan St. Louis has cooperated with the Mayor of St. Louis in establishing a commission on equal employment opportunities. This commission consists of a number of business and labor leaders in the City and its detailed program is administered by the St. Louis Council on Human Relations.

A "9 Point Program" has been developed by the Commission and fully endorsed and supported by the Chamber. It includes the following provisions:

THE EMPLOYER AGREES TO

1. Communicate to all levels of management a written statement of policy on equal employment opportunity.
2. Publicize its non-discriminatory policy so that all persons, regardless of race, creed, color, or religion, will know that they will receive equal consideration for employment on the basis of merit and qualifications.
3. Review for top management the employment records of present employees to determine if anyone is working below his level or has been denied a promotion or transfer because of race, and take affirmative action to insure that no person is discriminated against in hiring, placement, transfer, promotion or upgrading, or in the selection of apprentices.
4. Keep top management advised of the results of procedures and practices undertaken to implement the non-discrimination policy.
5. Operate all facilities such as cafeterias, rest rooms, recreational areas, clubs, etc., on a strictly non-discriminatory basis.

6. Inform all of its recruitment sources, both public and private, including the Urban League of St. Louis, of this employment policy.
7. Inform secondary schools and colleges where Negroes are enrolled of the company policy to employ on the basis of merit and qualification.
8. Display, where practical, the Cooperating with the St. Louis Commission on Equal Employment Opportunity seal in advertising for workers.
9. Keep the St. Louis Commission on Equal Employment Opportunity advised of progress toward equal employment opportunity, and also of lack of progress, including any lack of qualified applicants, so that the Commission can cooperate in establishing training programs in areas of skilled shortages.[29]

A COMPARISON OF THE VARIOUS APPROACHES

The following chart summarizes briefly the various types of action taken by the associations:

The South	*The Midwest*	*The East*
1. No studies 2. Advice on the Civil Rights Act of 1964 3. Encouragement of integration of public facilities 4. Committee meetings 5. Aid in establishing community relations boards and human relations boards	1. No active work in the past but some thoughts being given to problems at present 2. Committees 3. Symposia sponsored by the Chamber 4. Encouragement to groups outside the Chamber to work in the area on a voluntary basis	1. No active work 2. Committees 3. Encouragement to groups outside the Chamber 4. Encouragement to employers to provide employment on merit basis 5. Aid in establishing commissions such as a human relations commission

Some Comparisons

In comparing the activities of the various Chambers in the three parts of the country studied, some interesting points may be noted.

The Passive Attitude. In at least one city in all areas, there is a "hands off" policy in effect by the respective group. The reasons for such a policy are perhaps quite different. Among others, Jackson, Mississippi; Cincinnati, Ohio; Birmingham, Alabama; and Rochester, New York, all report little or no activity in the area under consideration. Racial strife that has swept through Jackson and Rochester in recent times may produce a different outlook in those two places in the future. The Cincinnati Chamber has not taken action since it does not wish to "overlap" work already under way by other groups, and the feeling is that the Ohio FEPC law remedies cases of discrimination in employment. In Birmingham, an altogether different outlook has been taken. Not only have Chamber studies been prepared to show the lack of damage done to the economy through racial strife (a most amazing conclusion!), but members have been notified by communications from the Chamber that they would be protected by local law enforcement in case they decide *not* to comply with the Civil Rights Act.

On the whole, it may be pointed out that in those areas where there has been inactivity on the part of groups such as the Chamber of Commerce, race relations have been poor if not very strained. A cause and effect relationship cannot be firmly established, but it is obvious that if an organization such as the Chamber takes no action in this vital field, surprise should not be registered when unfavorable disruptions occur that can be damaging to the business climate.

Committee Action. Formal and informal committees within the Chamber have been formed in all areas studied, with the most active ones in Chicago, Boston, and Columbia, South Carolina. Constructive committee action has been taken by various Chambers since they understand that the issues involved are more than moral, legalistic problems. It is simply good business to provide equal employment opportunities to all qualified members of the work force.

The Chicago Full Employment Committee, reported on herein, represents the most comprehensive plan of any surveyed. It has a definite purpose and plan of action with superior organization to make it an effective instrument in dealing with equal employment opportunity. The Boston Ad-Hoc Committee on Racial Issues also has been very successful in developing programs in the employment area, cooperating and assisting in the administration of the Massachusetts Plan for Equal Employment Opportunity. The Columbia, South Carolina Chamber has sponsored some informal committees of local citizens who have come together to discuss racial problems with some reference to job opportunities.

The decision as to whether or not to form a committee to work in this area has been arrived at in varying ways. In Chicago, considerable support was given to the idea since it was felt that maximum effectiveness could be achieved by many people with special knowledge concentrating on the various aspects of the problem. Interestingly enough, and by contrast, the New York Chamber Committee on Law Reform came to the conclusion in 1963 that a bi-racial committee "could be a visible sign that New York does not intend to perpetuate inequitable practices and customs," but "we doubt the wisdom of the Chamber's initiating the creation of such a committee" even though "if such a committee is formed the Chamber should give its active support to its work."

There is nothing inherent in committee work that means successful operation. It can fail as well as succeed. The Chicago and Boston experiences give excellent examples of successful ventures, and they are worthy of attention by other groups in large urban areas.

"Moral Suasion." What might be termed "moral suasion" has been used by several Chamber groups in all parts of the country studied. In Charlotte, North Carolina, the Chamber has used its influence in attempting to encourage the peaceful integration of all public facilities – hotels, restaurants, theaters, parks, etc. (even before the Civil Rights Act of 1964) – and the results have been gratifying. In Baltimore, Maryland; Cleveland, Ohio; and Indianapolis, Indiana, the respective Chambers have encouraged the formation of committees or other groups to work in the area of equal employment opportunity, education, and housing. This approach has been predicated on the notion that voluntary compliance is the key to successful race relations programs.

The interesting thing to note in making a comparison here is the differences in focus of the various groups. Before the passage of the Civil Rights Act, the major goal to be achieved in the South by civil rights workers was in the area of public services and education, and there was not great emphasis on equal job opportunity. The Charlotte Chamber, for example, felt it could make a contribution by encouraging peaceful integration in the public service area while emphasizing that it was not primarily concerned with Negro employment. In other parts of the country, for example Indianapolis, the focus of the Chamber has been in encouraging employers to provide employment on a merit basis without regard to race. Problems in the public service area already have been met or avoided by integration for some time. In the future, it may be expected that the efforts in the South, East, and Midwest will be more nearly alike in respect to civil rights. As the South removes its barriers to public service areas – both voluntarily and under the Civil Rights

Act – it will begin to concentrate on what is probably the most crucial problem to be faced – unemployment.

FOOTNOTES

1. Letter, November 15, 1963.
2. Letter, November 15, 1963.
3. Birmingham Chamber of Commerce, "An Information Memorandum with Regard to the Civil Rights Act of 1964," June 23, 1964, p. 2.
4. Birmingham Chamber of Commerce, *Birmingham, Alabama: Preliminary Report of the Current Economic Conditions of Metropolitan Birmingham, Alabama,* December 18, 1963, p. 4.
5. Letter, November 15, 1963.
6. "A Different Way: Charlotte Has Built Its Own Integration Road," *Charlotte Observer,* Sunday, July 14, 1963.
7. Letter, December 16, 1963.
8. Letter, November 18, 1963.
9. Letter, November 25, 1963.
10. Undated letter, Metropolitan Dade County, Florida.
11. Letter, August 3, 1963.
12. Letter, November 21, 1963.
13. Letter, November 29, 1963.
14. Letter, December 5, 1963.
15. Report to the Mayor of Nashville by the Metropolitan Human Relations Committee, November 14, 1963.
16. Letter, November 22, 1963.
17. John C. Schmidt, "Negro Unemployment – What City Business Men Are Doing About It," *The Sunday Sun,* Baltimore, September 27, 1964.
18. Baltimore, Maryland, Voluntary Council on Equal Opportunity, Inc., *The Equal Opportunity Employer,* pp. 1-47.
19. Thomas M. Hennessey, "Equal Rights" in *The New Boston Report,* Boston, Greater Boston Chamber of Commerce, May 22, 1964, p. 1.
20. *Ibid.,* p. 4.
21. New York Chamber of Commerce, Committee on Law Reform, *Racial Tensions in New York State* (New York, 1963), pp. 36-37.
22. *Ibid.,* p. 37.
23. Letter, December 2, 1964.
24. Letter, October 29, 1964.
25. Committee for Full Employment, *Merit Employment Manual,* Chicago Association of Commerce and Industry, 1964.
26. Letter, October 30, 1964.
27. Letter, November 9, 1964.
28. Letter, October 30, 1964.
29. St. Louis Commission on Equal Employment Opportunity, *9 Point Program,* 1964.

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EQUAL OPPORTUNITY AND EMPLOYMENT IN ILLINOIS

Frank H. Cassell*

Seldom, if ever, should one be invited to comment on his own work. Self-interest is too likely to cast a shadow over the objectivity of the commentary. Furthermore, people too closely involved with a project may not have the necessary perspective to place their work into proper relationship with other events. In spite of these handicaps, I shall discuss herein some of the work of the Governor's Committee on Unemployment of the State of Illinois, on which I had the honor to serve as chairman. Because of the limitations on objectivity from which any writer must suffer, I shall confine my paper to a firsthand account of the thinking and recommendations of the committee.

The Governor's Committee on Unemployment was made up of forty people who worked very hard and conscientiously to grasp the dimensions of one of the very complex problems of our time—the causes and cures of unemployment. It was a group of people who had courage to recommend plans, programs, and reforms which they felt were needed to reduce unemployment and increase the number of jobs in the state.

The main objectives of the committee were to establish a climate in which these problems could be faced in a rational manner and to provide to the people of the state the information necessary for their rational consideration.

In this commentary, I shall try to accomplish four things: To give some background on the organization and purposes of the committee; to summarize the data that the committee developed and used; to present its key recommendations and what has happened in Illinois since its report was delivered to the Governor on January 1, 1963.

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When the Governor of the state of Illinois, Otto Kerner, took office on January 1, 1961, 297,000 people in the state of Illinois or 6.9 per cent of the labor force were unemployed.[1] Unemployment costs in that year amounted to $181,000,000. Another $169,000,000 was spent on various forms of relief and welfare for some 334,000 people each month. Two-thirds of these people were receiving welfare benefits because of the direct or indirect impact of unemployment. These expenditures were 20 per cent of the total budget and were occurring at a time when money could not be found to improve the educational system.

But more important were the human costs. Two quotations from the introduction to the report illustrate the committee's concern for the individual:

> In a society where the common belief is that men who work are useful and those who do not work are not useful, unemployment becomes more than a problem of economics; it becomes one with deep moral and personal undertones. A job not only provides income, it provides standing in the community and self-respect. A job, and not just the income from it, is as much a necessity for the average American as is his daily bread, the clothing he wears and the shelter over his head.[2]

Again, the committee said:

> It is the effect of unemployment on the individual that causes the added concern, the unfortunate results on family life, the corroding effects upon standards of public and private behavior. Unemployment probably more than any other ailment afflicting modern man, operates to cut the person affected off from society around him.[3]

Unemployment moreover has been an exacerbating element in the relationship between the races. It has effectively limited the job opportunities of minority groups and increased resistance to their employment. It has prevented the most effective use of America's full manpower potential. It has raised questions throughout the world as to the capacity of the American private enterprise system to solve all these problems. These are some of the feelings and beliefs which governed the mood of the committee and influenced its work.

The composition of the committee was in itself interesting. It included representatives from industry, labor, and education together with elected and appointed government officials from both political parties. Its membership included an executive vice-president of a public utility, the dean of a graduate school of business, the president of an international union, state senators and representatives, the heads of both the state and local departments of public aid, and leaders of state and local educational institutions.

The backgrounds of the members guaranteed differences of viewpoint. But they were agreed upon one thing: the need for strenuous efforts to relieve unemployment in Illinois. How this group came to agree could be the subject of another paper, but suffice it to say that after eighteen months of discussion, study, and vigorous debate, all members of the committee were able to agree, and their report was published without dissent from any of its major recommendations.

FINDINGS

The committee began its work in relative ignorance. Little if any information was available to it about the characteristics of the unemployed. Practically no information was available as to why people were unemployed. Because of this lack of information, the committee, as its first major project, undertook in cooperation with the State Department of Labor a statewide survey to learn about the unemployed. The survey covered one hundred fifty thousand unemployed citizens of Illinois. Although it was not a representative probability sample, it was large enough to show important trends. Among them were these:[4]

1. The ranks of the unemployed included a smaller proportion of people with high skill than existed among employed workers; they also included a larger proportion of people with low skill or no skill at all.
2. The unemployed had fewer years of education on the average than the employed.
3. Of the unemployed, 45 per cent had been out of work five months or longer. Length of unemployment increased with the increase in age level.[5]
4. Primary wage earners, heads of families, constituted almost half of the total of long-term unemployed.
5. Forty-five per cent of the sample of unemployed were in the prime working age group of twenty-five to forty-five years of age.
6. The largest number of them (41 per cent) came from manufacturing, but manufacturing accounts for only 30 per cent of the total work force in the state.[6]
7. Thirty per cent of the unemployed, as against 10 per cent of the state's population, were nonwhite.
8. Negro unemployment exceeded white unemployment at

every occupational level; its greatest concentration was in the unskilled and semi-skilled occupations.

9. Unemployment among young people was three times higher than for the whole labor force.

Even at this early stage of the committee's work, the connection between education and unemployment began to emerge.[7] Further studies were undertaken, some by the committee itself and some by others encouraged by the committee. These began to fill in the picture a little more completely:

1. As bad as the urban situation was, unemployment rates in rural communities were very much worse. They ran up to 20 per cent in some areas.
2. Rural unemployment rates continued high despite a vast migration of young farm people to the cities. The farm population dropped from 20 per cent of the population of the state in 1910 to 8 per cent in 1950 to 5.6 per cent in 1960.[8] Eighty-one per cent of the people of Illinois now live in urban areas. Automation on the farm has reduced farm jobs and driven farm workers to the cities to find work.
3. But these people are ill-equipped to work in the cities. They were educated to meet the needs of 1900. For example: 114,000 students enrolled in state vocational education programs; the largest number, 60,000, were studying homemaking—a necessary skill, but one which hardly adds to employability. Thirty thousand boys were studying agriculture at a time when less than 5 per cent of the job openings were in agriculture. Schools which offered vocational training in expanding industries were rare indeed.
4. The quality of education of rural Illinois people and of people who migrated from the South was well below that needed to survive in an industrial society. One study which measured the educational competence of the unemployed in-migrant to Chicago showed that three out of five of those who said they had completed eight grades were functionally illiterate. They could not read well enough to learn a job which requires elementary reading and writing. Many could not fill out an employment application.[9]
5. Population and work force projections showed that in Illinois 75,000 new jobs needed to be created each year to stay even with the current rate of unemployment, but only 38,000 jobs a year were being created, or about half the number needed. This situation resulted because the rate of economic growth of the state was not fast enough to cope with the combined effects of a rapid growth of the labor

force and a substantial increase in productivity. The result was that unemployment remained disturbingly high until nearly thirty-six months of recovery had occurred.

6. The studies showed that during the sixties the work force of the Chicago area would increase 18 per cent. The fastest growth would be among women (27 per cent), nonwhites (43 per cent), and young people aged 20 to 24 (62 per cent). On the other hand there would be a loss of 2 per cent in the number of workers in the prime working age group of 35 to 44. The number of workers from 45 to 54 would increase 17 per cent. The total number of white employees would rise only 14 per cent; the total number of male employees, 13 per cent.
7. Unemployment in the inner rings of Chicago, other studies showed, ranges as high as 50 per cent in some areas. High school dropout rates go up to 80 per cent. Low family income, high relief rates, broken families, low educational attainment, and the Negro race are found together.
8. In areas where the educational level of Negroes equalled or exceeded that of whites, Negro unemployment was twice that of the white while the income level of Negroes was substantially lower than the white.

Thus, we see that not only had education emerged as one of the most important factors in unemployment, so had race and age. These, then, were the findings of the committee as to the supply of labor in the state in the coming years.

What would be the demand? The committee's projections added up about as follows: Jobs for the uneducated and the untrained were declining rapidly on the farms and in the cities, while the demand for high-talent, well-trained manpower was increasing at a rapid rate.

Demand for workers was increasingly concentrated in industry in the outer ring of the city, in the suburbs, and in rural locations —in areas remote from the high unemployment areas of the central city.

It was obvious that the skills of the people who would be available for work did not match the skills required in the available jobs. It was equally obvious that housing segregation kept workers apart from jobs. These situations existed at the time the committee was doing its research; they are more true today, nearly two years later, and they are likely to continue into the future.

The committee persisted in its efforts to find out exactly what jobs were opening up and what jobs were declining. At the time the committee began its work, and even today, most information is derived by inference. There is no way of reporting systematically the job openings occurring in the economy as they develop. We know about the manpower troubles long after they have occurred. We have no way to discover these trends early; consequently, our training programs, especially vocational education, lag far behind the actual requirements of the society.

Nevertheless, on very scanty data, some predictions were made. Our projections showed that the future, a bright future, was for those with good ability, and knowledge, and skill; these were the requirements of the emerging jobs and job patterns. For those of undeveloped ability, those lacking skills, those whose specialized skills were outdated, the future was bleak. And when one realizes that a high percentage of the Negro work force is characterized by these limitations and combines this with the virtual explosion of the Negro into the urban work force, one can begin to see the nature of the problem faced by the big cities.[10]

In-migrants, many of whom are illiterate, natural population growth in the ghettoes equal to the highest in the world, school conditions to match the ghettoes, segregated housing, unemployment three to four times as high as that of the whites, massive dependence upon relief for survival, disintegrated families, loss of the father as the family leader—these are the conditions under which new citizens are being produced. And across the board in industry, the requirement is high school graduation equipped hopefully with white middle class values, and in many cases, if they can help it, no Negroes, even if they have the education and the values. The educational requirements of business and industry are rising faster than the rising Negro educational level. The Negro schools in the cities and [illegible] the United Negro Colleges continue to lag badly, and the number of grades completed is often quite misleading.

Placing this Chicago and Illinois picture against a national backdrop, we can see the following: there are eight million functional illiterates in the United States; one-third of our young men if they were examined would be rejected for military service. One-half of these rejections would be due to failure on the mental test.[11] Illiteracy rates are four times as high among Negroes as among whites.[12] Daniel Bell has pointed out that what is different from the past is that education today — and tomorrow — is the chief means of social mobility, and that by charting the school dropout rates and matching them against future skill requirements, a rough picture of a class society can be sketched thirty years from now. It will be a class society and predominately a color society. Given the political tensions within this country, and the changed relations of the United States with a world which is dominated numerically, and perhaps politically, by Africa and Asia, one need not spell the consequences of the possibility that by losing out in the educational race the Negro will come to be the predominant and permanent member of the society of the disadvantaged. Even with the new Civil Rights Act, equal opportunity cannot be guaranteed unless the nation is prepared to spend money and effort in a massive catch-up program, which frankly places the immediate effort where the immediate need is the greatest.

With this broad picture of unemployment and the concomitant social problems in mind, the committee next turned to some of the questions of automation and what to do about them. The committee's orientation was, however, broader than merely automation. Rather, its major thrust was toward the questions of economic growth, industrial change, demographic changes, and the question of change in the society itself.

No one doubts that many of the difficulties besetting us stem from the fact that we are living in the middle of an enormous revolution which is characterized by technological change. Harrison Brown describes the closest parallel to this as being that which occurred 7,000 years ago when our primitive food-gathering ancestors learned that they could cultivate edible plants and domesticate animals. With the emergence of these new techniques, more than 500 persons could be supported in areas where previously only one could be supported. A small but important part of the population was liberated from the necessity of producing food.[13] In like manner, we have continued to liberate more people from the tasks of producing food, this time through advanced machine and chemical technology, and we are now liberating significant numbers of people through automation and machine technology from the production of goods. We are moving rapidly toward the liberation of people from the production of paper work and services.

As a matter of fact, we are liberating man from the work which machines can do and freeing him to do the work only men can do. Unfortunately, many men are better prepared to do the work of machines than they are to do the work of men, for the work of men is mostly the work of the mind, and the work of machines is work of the back and the finger. These considerations led the committee to focus heavily upon how to effect change, not oppose it; how to alleviate the stresses and hardships of adjusting to change; and how to create new forms of work.

It was not, therefore, accidental that the first analysis in the report concerned the question of economic growth. It began with these observations:

> Economic growth requires change, change in the types of goods and services produced, in methods of production, in the location of economic activity, and the skills required of the labor force. . . . The rising per capita incomes we have enjoyed in Illinois have emerged from a process of change, a process that will surely continue into the future. . . . Reduction of employment in an industry may in fact be proof of economic progress; it may point to increasing productivity in that industry with a consequent release of manpower for other productive work. If, for example, employment in agriculture had remained at the same proportion of the labor force that it was in 1890, the fifty-four million persons engaged today in such non-agricultural production as manufacturing, mining, construction, services, trade, transportation, and governmental work would be reduced to twenty-five million and our standard of living would drop accordingly.

In other words, the committee did not consider manufacturing as the sole model for creating work. Rather it saw the whole society, the whole domestic and world economic system, as its model for creating work and jobs. It recognized the inevitability of the automatic factory based upon continuous flow, feedback adjustment, and electronic computers to guide the entire operation, but it did not fear or oppose this development. Instead, the committee asked: How can this development be made to better serve mankind? How can people be prepared to operate this system? How can those displaced be trained and placed in other jobs and in other industries? How can people become more adaptable and more mobile?

In searching for answers, the committee decided that it should make recommendations in two areas: the creation of jobs and the preparation and adjustment of people for change. In the second area, it uncovered what it felt to be a number of powerful barriers or deterrents to change and adjustment.

The first barrier is the natural reluctance of people to change their ways. This reluctance is compounded by the fact that an individual is often not conscious of change and its significance to him. This blindness is not confined to the individual directly affected. It is also characteristic of business, labor, and governmental institutions.

People often oppose change because they mistakenly believe that opposition will prevent change and preserve a vested interest.

Another barrier is that of mobility, or rather immobility. We are a highly mobile nation, yet there are vast numbers of us who cannot make the necessary moves to take advantage of emerging job opportunities in other areas. The committee, in its report, said:

> Mobility of labor is a first condition to the achievement of full employment; if workers are not free or do not feel themselves free, to move to new jobs or to new areas, developing job opportunities cannot be used to offset declining job opportunities . . . . in an industrial society operated by private enterprise, jobs do not generally go to workers, workers must go to jobs.

Among the strongest barriers to mobility are age, race, seniority, pension and insurance arrangements, and a simple lack of information.

The committee's on-the-spot observations were that the older one is, the more reluctant he is to move away from home. He is attached to his community and to his investment in his home. In most cases that home represents his major savings, and in a declining area, he can seldom sell it without taking a substantial loss.

A committee study of unemployed workers showed that skilled workers were more willing to move than unskilled workers and that farm workers were especially willing to move.

The committee's feeling was that willingness to move depended more on the availability of jobs than upon an inherent reluctance to move stemming from sentimental attachment to the old job. Coal miners, however, often saw factory jobs as having lower status and were reluctant to change.

A number of barriers exist because of organizational rules. Certain forms of seniority, for example, have been a deterrent both because the worker is reluctant to leave the area and lose the advantages of the seniority he has built up, and because he fears that in any new job the seniority rules might make him the first to be laid off. Then there are his rights in pension and health insurance plans. Older workers, especially, need these protections. And, finally, workers are often completely ignorant of job opportunities in other labor market areas. This ignorance is not confined to the low-skilled or unskilled worker.

Race poses barriers to employment in special ways. In former years Negro workers, turned down at one hiring gate, would find other opportunities open to them; there were large numbers of unskilled jobs that needed filling. In addition, agriculture provided many jobs for Southern Negroes. Neither of these conditions is true today. The market for the unskilled is steadily shrinking. Even the qualified city-dwelling Negro is hampered in finding a job by the suburbanization of industry which, together with the elimination of public transportation facilities, removes the job effectively from him. In fact, the committee staff encountered employers who suburbanized specifically in order to assure themselves of a white work force.

An even more subtle barrier, and one affecting the college-trained Negro, is the fact that, because he has long been precluded from employment by business and industry, he is concentrated in the non-business fields — largely in the social and behavioral sciences and in medicine, teaching, law, and the ministry. Employers who want engineers, scientists, and graduates of the business schools, such as the Wharton School of the University of Pennsylvania, do not look to the older, more traditional professions, in which Negroes are trained, in their search for management talent.

A final set of considerations was the need for developing in Illinois a pool of high-talent scientific and non-scientific manpower to provide leaders for every aspect of human endeavor, including strengthening the economic base of the state and solving the problems of unemployment.

The committee recognized that leadership for today and for the future must draw from all our racial, ethnic, and religious groups. The committee called upon the people of the state to commit themselves fully to equality of opportunity in education, in employment, in housing, so that every racial and religious group would be free to produce the leaders needed by the state; leaders to create jobs, leaders to educate the future generations, leaders to solve our complex human relations problems, and leaders to fill the myriad of jobs which can make the difference between a leading or a lagging state.

RECOMMENDATIONS

These are only some of the problems and some of the considerations. What can be done about them? The committee's recommendations were in six areas:

1. Accelerating the state's economic growth;
2. Improvement of education and training in the state;
3. Strengthening community planning;
4. Improving the job-finding process;
5. Income for the unemployed; and
6. Special work programs for special groups of the unemployed.

First, as to economic growth — national economic policy as we all realize determines in large part what can be accomplished at the state and local level. Without a national effort to insure a rate of economic activity great enough to absorb most of the unemployed, state efforts will be futile. The $11 billion tax cut is part of such a national economic policy.

Since 1961, unemployment in the state has dropped from 6.9 per cent to 2.9 per cent. High economic activity has not only helped reduce unemployment, but it has provided the basis for equal job opportunity for many more people than would have been the case had the unemployment rate remained high.

In order to promote the state's economic growth, the committee recommended the establishment of a State Advisory Council on Economic Affairs, a State Department of Commerce and Science, and the encouragement of similar local groups. It recommended the strengthening of the economic infra-structure of the state by development of water resources and industrial parks and expanded urban renewal efforts. And it recommended stimulation of scientific research activities and increased attention to the special problems of chronically depressed areas. Finally, it recommended that the state undertake to expand its foreign trade and to improve the functioning of the job market through development of a means for gathering information on job vacancies.

Second, with respect to education and training — the committee recommended a concentrated anti-dropout campaign to be conducted by schools and communities. It recommended improvement of vocational education, the widespread development of technical institutes, extension of the compulsory education age to 17 or high school graduation, more post-high-school facilities, and a variety of other measures all intended to modernize the state's educational institutions. The committee emphasized the importance of competent and adequate guidance and counseling, both for young people and for present members of the labor force.

With respect to improving the job-finding process — the committee recommended strengthening the Illinois State Employment Service by a variety of measures including the establishment of a Board of Advisors, strengthening of cooperative placement efforts between the schools and the Employment Service, and by emphasis on upgrading and training the agency's staff.

Supplying income for the unemployed — the committee recommended the extension of work relief programs to provide both income and training, establishment of public works programs, expansion of sheltered work and rehabilitation programs, and establishment at the national level of a Youth Conservation Corps.

All of the committee's recommendations have not been covered by any means. Some of them have been accomplished, some of them have been started, and some of them are still only hopes.

The committee's major accomplishments were three:

First, it helped the people of the state to focus on the problem of unemployment. It made them aware and concerned.

Second, it served as a kind of blueprint for the many actions and studies which have been undertaken since. It was of interest to find that the platform planks of both Governor Kerner, who originated the study, and his opponent, Charles F. Percy, included many of the recommendations of the report. In fact much of the debate revolved about who could best reduce unemployment and make the state grow economically. And third, the study demonstrated the feasibility and value of state-level planning even as limited as was this effort.

More specifically, the report helped the Governor give impetus and direction to his efforts to solve the unemployment problem. It stimulated the establishment of a powerful and effective Foreign Trade Committee, headed by the president of the Caterpillar Tractor Company; it gave strong support to numerous state and local efforts to accelerate the state's economic growth. Programs for the widening and deepening of waterways and the development of recreational facilities were accelerated. Illinois, and Chicago in particular, has led the states in utilization of the Manpower Development and Training Act. In this connection, pre-apprentice toolmaker programs using MDTA money have eased entrance into the craft for many young people who would otherwise have been precluded from entering it.

In probably the largest tutoring program in the nation, over 3,000 volunteers from 17 Illinois college campuses, women's organizations, and business groups are working with some 7,000 children and teenagers. About 4,500 of these young people are receiving tutoring on a one-to-one or two-to-one basis. One study of the Northwestern University tutoring project showed that the schoolwork of those being tutored improved in 50 per cent of the cases. This effort grew out of the awareness of widespread illiteracy which kept people from jobs and from further schooling.

A massive effort (the JOBS program) to train 1,000 currently unemployable youth, many of whom are functionally illiterate, has met substantial success in developing attitudes necessary for employment, in teaching job skills, and in providing some job experience, so that participants can finally hold full-time jobs. (This program has been renewed for another year.) This is an example of a committee recommendation of a special program for special people. It is also expensive, as is most rehabilitation work, double the cost of educating a child in the Chicago Public Schools.

The Full Employment Committee of the Chicago Association of Commerce and Industry was a direct outgrowth of the committee's report. Its membership, which includes representation from every segment of the community, took as its first task that of breaking down the racial discrimination barrier among its 6,000 members. It issued an equal opportunity brochure and held seminars to provide the encouragement and know-how to employers, both large and small. It has supported the development of grassroots job opportunity fairs held in the areas where the people know little, if anything, about the realities of the world of work and about what it takes to get and hold a job. Employers of the Chicago area, the State Department of Personnel, and the Illinois State Employment Service have provided interviewers and counselors. Some 9,000 young people, their parents, and their teachers have participated in these fairs. Hundreds have been employed by the participating companies.

More sophisticated methods for providing labor market information are being developed by a Governor's Committee on Job Vacancies, headed by Professor Albert Rees of the University of Chicago. A sample study began in October of this year under the direction of the U. S. Bureau of Employment Security.

The extensive recommendations on education are limited by the availability of funds. In this connection, nowhere is there a clearer demonstration of how local inattention or absence of concern or false economy creates the pressures to go to the federal government for help. The Chicago school system is embroiled over the question of integrating the schools and is short of money to provide needed mass saturation programs. Many of the educational programs designed to relieve unemployment are being carried on outside the school system. The effort to raise money locally for the schools is held up by the alienation of a rural-controlled legislature from the urban people and the fear of the white ethnic groups of the Negro's invading their neighborhoods.

Finally, a number of the committee's recommendations have found their way into President Johnson's anti-poverty program. These include extension of work relief programs to more welfare recipients to provide useful work as well as income and to increase skills. They include the establishment of a Youth Conservation Corps, which was incorporated into the poverty program as the Job Corps, to provide work and training to disadvantaged young people. Since the number of young people in the labor force will grow 60 per cent in the next ten years, this program and related programs should be of great value.

These examples of action on the problems of unemployment and poverty are in some small part due to the atmosphere created by the publication of our report. A spirit of adventure and experiment has developed in the state, to which I feel the committee and the report contributed, and things are happening. The authors of the report could not have hoped for more.

FOOTNOTES

1. *Report of the Governor's Committee on Unemployment,* p. 31. As of October, 1964, unemployment had dropped to 131,000 persons or 2.9 per cent.

2. *Report,* Introduction, p. 11.

3. *Report,* p. 1.

4. These findings are given in detail in Chapter VI of the *Report.*

5. "Of the 4 million unemployed on the average in 1962, some 1.1 million were classified as long-term unemployed, i.e., unemployed for 15 weeks or more. . . . The size of hard-core groups, while also moving with the (business) cycle, has been distinctly higher as a proportion of total unemployment during the last five or six years than at any time since 1946." Adolph Sturmthal, *Current Manpower Problems* (Urbana, Illinois: University of Illinois, Institute of Labor and Industrial Relations, 1964), p. 5.

6. What is happening to employment in manufacturing is well described in the following comment by William Janovich: "The semi-skilled were those replaced by single-purpose machines, both men and women who are performing the tasks which can be performed by machines (and better) are most easily replaced by a machine. Machines are conceptually unindividual; no machine was ever created to perform a single operation just once. Men 'lost' control over their movements — natural rhythms — as individuals with the invention of mechanical clocks, an event that took place before the industrial society got into high gear." *Saturday Review of Literature,* July 18, 1964, p. 16.

7. The relationships between education and employment are explored in detail in Chapter IV of the *Report.*

8. A comparison of the average age in thirty-six distressed downstate counties: the average age of people in 1950 was thirty-two years, seven-tenths younger than the average person in the state. By 1960 it was thirty-four and two-tenths, or older than the state average by three years. Average age in other rural counties declined as did the average for the state. *Report,* p. 27.

8. Cook County Department of Public Welfare, *The Blackboard Curtain,* A Study to Determine the Literacy Level of Able-Bodied Persons Receiving Public Assistance (Chicago: Science Research Associates, 1963), p. 70.

10. *Report,* Chapter III.

11. *One-Third of a Nation.* Report on Young Men Found Unqualified for Military Service. U. S. President's Task Force on Manpower Conservation, 1964.

12. *Ibid.*
13. Harrison Brown, "Solve Social, Political Broils and Technology Offers Eden," *Business and Society,* Autumn, 1963, p. 4.

17

NEGRO EMPLOYMENT IN LANCASTER, PENNSYLVANIA*

Walter J. Gershenfeld**
Richard L. Rowan***

This study had its genesis in a number of conversations among members of the Lancaster Chamber of Commerce on the subject of minority group employment problems. Casual talks led to planned meetings. The individuals involved in these meetings were organized into a committee of the Chamber of Commerce, which was identified as the Employment Opportunity Committee.

The outward manifestations of the problem had been relatively minor in Lancaster in comparison with the rest of the nation. Nevertheless, it became clear to the committee that this troubled area of American life required an accurate appraisal of the local facts and a program for action based on those facts. The committee invited Dr. Herbert R. Northrup, Chairman of the Department of Industry, Wharton School of Finance and Commerce, University of Pennsylvania to prepare a proposal for the study of minority group employment in Lancaster. The proposal was accepted by the Chamber of Commerce, and the study was authorized as an official Chamber project as of February 1, 1964. The study was led by Dr. Northrup, whose staff included Dr. Richard L. Rowan of the University of Pennsylvania and Dr. Walter J. Gershenfeld of Temple University.

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*This report was prepared for the Chamber of Commerce of Lancaster, Pennsylvania under the direction of Professor Herbert R. Northrup, Chairman, Department of Industry, Wharton School of Finance and Commerce, University of Pennsylvania.

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In authorizing the study, the Chamber agreed that we were engaged in an attempt to understand

A. The nature of the non-white population in terms of its skills, abilities, background, attitudes, and aspirations.
B. The nature of the jobs available in Lancaster generally.
C. The experience of minority groups in this labor market setting.

Almost immediately, it was realized that the Negro population was the only sizable minority group for whom a study of sufficient size could be made to warrant valid conclusions.

In designing and planning the field work for the project, opinions and experiences were solicited from the members of the Chamber Committee, the executive staff of the Chamber, community leaders, Negro leaders, and other interested persons. The final field work design was a three-part operation.

First, a broad-gauged analysis of the demand for labor in Lancaster was made. The questionnaire to employers asked them to identify by job title the number of people hired in 1963 as well as the number already hired in 1964 and that they planned to hire during the year. No attempt was made to identify the number of positions filled by Negroes. Rather, we wanted to know the "profile" of the hiring pattern for all people in Lancaster. It was felt that this was the significant fact, namely, the type of job opportunity in Lancaster without regard to color or any other factor.

Second, in the Negro community, we decided that a similar "profile" of the wage-earning community was needed. Here a questionnaire was drawn up with the assistance of Dr. Robert Kleiner of Temple University. This questionnaire was field-tested and then administered by Negro interviewers on a random-sampling basis to every third home in the heavily Negro-populated parts of the Seventh Ward in Lancaster. The administration of this part of the program was greatly facilitated by a carefully drawn map of the Negro community showing numbers of dwelling units and concentrations of Negro population.

Third, the survey information was supplemented by directly interviewing most of the key employers in the area. An attempt was made to interview virtually every employer of over 500 people in Lancaster and its immediate surrounding area. A pledge of individual anonymity was made to all companies participating in interviews, and this pledge has been honored. However, it is possible to present a general summary of the interview findings.

Prior to examining the results of the field research, it is in order to note briefly some pertinent facets of the Lancaster setting.

THE SETTING FOR THE STUDY

The Industrial Setting

Lancaster was destined to become a leading food-producing county from its very beginning. Earliest German settlers deliberately chose the area because it showed a heavy growth of forest trees nurtured in limestone soil. Careful handling of this soil for more than two centuries finds it more fertile than when it was first cleared. In fact, scores of farms are being operated by descendants of original settlers operating under land grants from William Penn. Tobacco and cattle were the leading agricultural products. This, in turn, led to tobacco conversion's becoming a major industry. It is interesting to note that the tobacco industry is now a minor one in the county.

Lancaster's industrial history includes such proud names as the Conestoga wagon and the Pennsylvania rifle. Industries of prominence were the tobacco industry; textiles, including silk, umbrellas, and clothing; watches; wood products; foundries and heavy machinery.

Industrially, changes have come thick and fast in the period since World War II. Many of the old names are gone. Some of the remaining old-line major firms are growing but achieving greater productivity with relatively fewer people. However, the most important developments have revolved around two factors: (1) the growing recognition of Lancaster, by diverse, major American firms, as an extremely desirable place to work and to live, and (2) the start of arterial belt highways ideally designed for industrial growth among their paths.

Probably the most interesting aspect of the post-war growth is the change of industrial emphasis. Lancaster has been uniquely successful in having had losses in some old-line Lancaster industries countered by gains in light industry. Communities the country over have vied for clean, light industry, such as electronics and small machine products. Lancaster has found precisely this type of company wanting to come in or to expand an existing facility. It should also be noted that some impressive gains have occurred in primary metals. The historic balance between agriculture and industry has continued, but with much better diversity in each of these groups.

The significance of the above lies in the fact that while substantial decreases were taking place in the Lancaster industrial picture, these were being counterbalanced by even more substantial increases in industries generally considered desirable. The Chamber of Commerce has found interest in a Lancaster location continuing apace on the part of many leading American firms. Virtually all of the companies which have entered Lancaster since World War II are still there and, even more significantly, have chosen to expand their Lancaster facilities in considerable measure.

The Race-Relations Setting

Lancaster has had a Negro population from its very beginning. Indeed, one of the earliest references to a Negro in the county occurred in 1736 and concerned a skilled tradesman, a blacksmith. In his book *The Susquehanna,* Carl Cramer noted that during a Maryland-Pennsylvania border dispute in November, 1736, the Sheriff of Lancaster County captured one Thomas Cresap, leader of a Maryland surveying party:

> In order to make doubly sure that their captive would not elude them, the possee immediately marched him to Lancaster and there employed a Negro blacksmith to fit him with iron handcuffs. . . .

Negro slavery existed in Pennsylvania throughout the entire Colonial period. It never found widespread acceptance as an institution, however, and as early as 1754 the Quakers officially condemned slavery and in the next year banned from meeting those who practiced it. In 1780 the commonwealth passed an act for the gradual abolition of slavery within its bounds. No child thereafter should be born a slave in Pennsylvania. The Quakers, who took the lead, enjoyed the quiet but effective backing of the Pennsylvania Dutch.[1]

The historic race-relations setting must include a note on the underground railroad. A number of the routes of the escape system for Southern slaves ran through Lancaster County. Lancaster and Columbia were both prominent way stations on the underground railroad. In fact, Columbia was generally conceded to be the capital of the railroad. The very name, "underground railroad," originated during a visit to Lancaster County by a disgruntled slave holder, who announced, "There must be an underground railroad out of here."

Thus, Lancaster has historically taken a liberal position when tested on the issue of race relations. A review of the past year, however, in Lancaster shows such newspaper headlines as:

NAACP Leads Protest Against Hiring Practices
Minorities Ask Say in Planning
NAACP Takes Survey on Jobs
NAACP Lists Job Progress

Clearly, ferment is present. The purpose of the remainder of this study will be to introduce the facts on the labor market situation in Lancaster as they affect Negroes and to present them so as to provide a basis for analysis of the situation.

The Employment Setting

Lancaster is considered—with considerable envy by her neighbors—to be a full-employment economy. Although this is not precisely the case, it comes reasonably close to the truth to be descriptive.

In the Lancaster labor market, defined by the Bureau of Employment Security of the Pennsylvania Department of Labor and Industry as being coextensive with Lancaster County, the average employment for 1963 by month was approximately 120,000 employees. Unemployment ranged between 3,000 in October and 5,300 in February, averaging 4,000 for the year. (See Table 1.) On a percentage basis, the average monthly unemployment for the year 1963 was 3.2 per cent. Further, unemployment was 3 per cent or less in the months of April, May, July, August, September, and October.

TABLE 1

EMPLOYMENT AND UNEMPLOYMENT, LANCASTER, PENNSYLVANIA, 1963

	Total Employment	Non-Farm Employment	Total Unemployment	Per Cent Unemployment
January	115,900	106,600	5,100	4.2
February	116,200	106,800	5,300	4.4
March	116,900	107,500	4,800	3.9
April	118,000	108,400	3,600	3.0
May	119,600	109,000	3,300	2.7
June	122,200	109,700	4,200	3.3
July	122,800	109,700	3,800	3.0
August	124,400	110,900	3,600	2.8
September	123,500	111,200	3,300	2.6
October	121,600	110,700	3,000	2.4
November	120,400	110,400	3,800	3.1
December	119,400	110,100	4,400	3.6

Source: Bureau of Employment Security, Lancaster, Pa. (Revised Series)

Unemployment rose sharply to 4.6 per cent in January, 1964.

However, this was attributed to the snow and bad weather which blanketed the county during that month. The rate thereafter fell quickly to 2.5 per cent by May and by October had declined to the almost incredible figure of 1.8 per cent.

TABLE 2

EMPLOYMENT AND UNEMPLOYMENT, LANCASTER, PENNSYLVANIA

January—October 1964

	Total Employment	Non-Farm Employment	Total Unemployment	Per Cent Unemployment
January	116,600	107,400	5,600	4.6
February	117,700	108,400	5,100	4.2
March	118,300	108,900	4,300	3.5
April	119,100	109,700	3,400	2.8
May	125,300	113,000	3,800	2.5
June	124,700	112,400	3,800	2.9
July	125,400	112,300	3,300	2.6
August	125,600	112,400	3,100	2.4
September	124,600	112,600	2,500	2.0
October	123,100	112,400	2,300	1.8

Source: Bureau of Employment Security, Lancaster, Pa. (Revised Series)

Farm employment has continued to decline as a source of employment and now represents perhaps 8 to 9 per cent of the employment total. In the summer months this figure rises to approximately 11 per cent. The remainder of employment is almost evenly divided between manufacturing and nonmanufacturing industries.

There is nothing on the horizon to indicate that these trends of increased employment with low levels of unemployment are in any jeopardy in the foreseeable future.

THE DEMAND FOR LABOR IN LANCASTER

Methodology

A "profile" of the over-all demand for labor in Lancaster was desired. In effect, this meant that we were interested in *all* jobs which were being filled by Lancaster employers. There was no attempt to limit the analysis to those positions with which the

Negro is frequently associated. Instead, the deliberate decision was made to determine exactly what type of hiring was taking place in Lancaster without regard to such diverse factors as level of the job or color of the applicant.

Accordingly, two questionnaires were created. The first of these asked employers to list by job title the number of employees hired in 1963. The second asked employers to repeat this effort for 1964, but with the further proviso that they indicate their hiring plans for 1964 by calendar quarter. Since the questionnaires were mailed in the second quarter of 1964, respondents were quoting their actual experience for the first quarter and part of the second quarter and extrapolating for the remainder of the year.

The questionnaire was sent to seventeen employers of more than 500 employees in approximately a seven-mile radius from Lancaster. (It became quite clear that the effective labor market for the Negro community of Lancaster lay within that radius, if indeed it reached that far.) In addition, a sample of 169 smaller employers was constructed as follows from employer lists available to the Chamber:

1. All employers in the Lancaster urbanized area with over 100 employees were included.
2. The questionnaire was sent to approximately every sixth organization employing more than ten individuals. An attempt was made to include at least one company in each classification in a detailed breakdown of the firms by standard industrial classification code.

   (The figures to follow are without benefit of replies from the construction industry. We were informed that the reason was largely the volatile and seasonal nature of contract construction. In 1963 the contract-construction industry ranged from a low of 4400 employees in February to a high of 6500 employees in October.)

Previous governmental surveys in other communities on the subject of manpower needs had provided their respondents with a long list of job titles for them to report against. The conclusion of many observers was that this approach tended either to frighten respondents about the magnitude of the task or to force a respondent to slot his openings exclusively into the listed categories. The decision was made to use an open-end questionnaire, permitting the employer to list his job categories in the manner in which he normally described them.

The Results — 1963

Forty-six usable questionnaires covering 1963 employment were received. The questionnaires represented employers with a total work force of 18,254 employees at the time of the survey. The labor force for the Lancaster labor market as a whole at the time of the survey was approximately 120,000 employees. Although there is no analysis available of the size of the labor market in a seven-mile radius of Lancaster, a reasonably informed view is that the respondent sample covered approximately one-quarter of the appropriate labor force.

It should be emphasized that the county results are not necessarily synonymous with these figures. There are two principal reasons for this. The employment mix in the seven-mile radius and in the remainder of Lancaster County is not the same. Further, responding firms tend to be heavily weighted by expanding firms.

Table 3 presents a summary of the data for 1963.

The first noteworthy fact is that these employers hired a total of 2,120 individuals during the year. This represents net new hires and does not include recalls or part-time employees. The high number does not mean necessarily that these companies were experiencing rather high turnover and were unable to retain their employees. Rather, it would seem to be more a function of corporate expansion and growth during 1963. We cannot tell how much of this employment went to already employed individuals. Nevertheless, the fact remains that the employment sign was out in Lancaster for a total of 2,120 positions, which were available to qualified job applicants.

Second, 40.6 per cent of the openings were for unskilled labor. According to U. S. Department of Labor figures, laborers and operative and kindred workers amounted to a total of 23.4 per cent of the labor force nationally in 1963. This would seem to imply that a relatively full employment economy such as Lancaster's may use a greater percentage of unskilled labor.

There are few surprises in the data for professional and managerial, clerical and kindred, and sales personnel. The 8.1 per cent figure for semiskilled personnel is noteworthy, however. It exists despite the strongly expressed preference or necessity for hiring employees in entrance jobs and upgrading them with on-the-job training. Although there are difficulties in categorizing machine operators as unskilled or semiskilled, approximately 8 per cent of employment did go directly to individuals in the semiskilled category.

The Results — 1964

The 1964 results were interestingly more complete than the 1963 results in coverage. Fifty employers, representing 22,627 employees, responded to this survey questionnaire.

TABLE 3

EMPLOYEES HIRED IN 1963

Type of Occupation	Number	Per Cent
Professional and Managerial	171	8.1
Clerical and Kindred		
General Clerical	284	13.4
Clerk-Typist	46	2.2
Stenographer, Secretary	46	2.2
Data Processing	11	0.5
Sales		
Sales Representative	20	0.9
Route Salesman	53	2.5
Sales Clerk	90	4.2
Service		
Building Service (including janitor, elevator operator)	97	4.6
Protective Service (including guard, watchman)	11	0.5
Personal Service (including waitress, bus boy, food handler, beauty operator)	26	1.2
Medical Service (including practical nurse, attendant, aide)	104	4.9
Skilled (excluding construction industry)		
General	66	3.1
Apprentice	21	1.0
Semiskilled		
General (including technician, mechanic other than 1st class, inspector, paint sprayer, bench hand, laboratory aide, seamstress)	171	8.1
Truck Driver	12	0.6
Fork-Truck Driver	30	1.4
Unskilled		
General Labor (including material handler, assembler)	423	20.0
Machine Operator	96	4.5
Heavy Labor	342	16.1
TOTAL	2120	100.00

The results for 1964 are compared with the 1963 results in Table 4 below:

TABLE 4

PERCENTAGE DISTRIBUTION OF EMPLOYMENT

Type of Occupation	1963	1964
Professional & Managerial	8.1	13.1
Clerical and Kindred		
General Clerical	13.4	10.3
Clerk-Typist	2.2	1.9
Stenography, Secretary	2.2	1.6
Data Processing	0.5	0.4
Sales		
Sales Representative	0.9	2.1
Route Salesman	2.5	2.8
Sales Clerk	4.2	3.5
Service		
Building Service	4.6	3.6
Protective Service	0.5	1.1
Personal Service	1.2	1.9
Medical Service	4.9	2.8
Skilled		
General	3.1	5.5
Apprentice	1.0	4.0
Semi-Skilled		
General	8.1	9.6
Truck Driver	0.6	0.7
Fork-Truck Driver	1.4	0.7
Unskilled		
General Labor	20.0	12.1
Machine Operator	4.5	6.1
Heavy Labor	16.1	16.5
Total	100.0	100.0

Basically, the data for 1964 are distributed much as they were in 1963. Nevertheless, a number of classifications showed significant increases or decreases. The categories covering employees classified as professional and managerial, sales representative, skilled craftsman, and apprentice contained most of the increases. These categories are noteworthy for being at the upper end of the employment scale in terms of background requirements and status. On the other hand, the most sizable decreases occurred in general clerical, medical service, and general labor categories. The decline in general labor from 20.0 per cent of new hires to 12.1 per cent of new hires was itself the single greatest change on an absolute percentage basis. Thus, the 1964 data report an emphasis in favor of higher-level positions on the economic scale when a comparison is made with the 1963 results.

One likely hypothesis is that major changes in a few large companies can account for the difference. For example, one large company added much more in the way of general labor in 1963 than it plans to do in 1964. On the other hand, another company has begun adding substantial numbers of employees in excess of its reported 1964 plans; it is our understanding that the increase includes many employees classified as general labor. Offsetting adjustments for such occurrences could well restore the 1963 relationship among the employment categories. Another possibility is a long-term, upward trend in skill requirements.

Whatever the reason, it must still be emphasized that employer reports for 1964 indicate that one out of every three openings will be in the unskilled-labor category. When unskilled service-trade positions are added to this total, at least 40 per cent of the openings will not require significant previous training and experience. Thus, it can be said that the 1963 result showing the prevalence of unskilled-labor openings still applies in 1964.

THE COMMUNITY QUESTIONNAIRE

Methodology

A twenty-four-question interview form was constructed to investigate the background, mobility, schooling, work experience, and aspirations of Negro wage earners in Lancaster. (See Appendix A-4).

The actual administration of the questionnaire was on a systematic sampling basis utilizing a carefully drawn map of the Negro community. The map showed the number of dwelling units in each block in the Negro community and indicated the Negro population concentration as heavy, moderate, or sparse. All blocks classified as heavily populated by Negroes and many of the moderately populated blocks were included in the same study. Together, these blocks constitute approximately 80-90 per cent of the Negro community.

Negro interviewers were used exclusively. Here it was felt that this would materially increase the reliability of the response. These interviewers were selected with the advice of leaders of the white and Negro communities. The purpose and content of the questionnaire was explained to the interviewers who then practiced a sample interview with members of the research committee. In addition, one interviewer field-tested the questionnaire over a one-week period.

The instructions to the interviewers revolved around the necessity of maintaining a proper sample. The interviewers were told to attempt to interview each member of the labor market in every third dwelling unit in their assigned territory. No substitutions of dwelling units were permitted. After an appropriate introduction, the interviewer asked for the number of individuals working or looking for work in the dwelling unit. In those few cases where no resident of the dwelling unit was in the labor market, the interviewer moved on to the next third dwelling unit. The interviewers maintained a control sheet log in which the number of every third dwelling unit in their assigned territory was listed. The interviewers were to return to any dwelling unit where they were unable to complete the interviews. In addition, they were asked to indicate the number of call-backs required to complete their interviews or the reason for failure to complete the interviews.

The interviews were to be conducted in the early evening after dinner or on week ends. These hours were used to permit the interviewers to find wage earners at home. Once the number of labor market participants in a given dwelling unit was properly ascertained, the interviewers were, of course, free to complete the interviews at any convenient time.

A total of 173 usable questionnaires were returned by the interviewers. These questionnaires were tabulated and constitute the basis for the information which follows on the characteristics of the Negro community in Lancaster. It should be noted that in some cases fewer than 173 responses have been tabulated. This may be accounted for by incomplete responses or responses otherwise difficult to tabulate.

GENERAL POPULATION CHARACTERISTICS

1. In what community (city, town, village) and state were you born?

As can be seen, approximately one-third of the Lancaster Negro population were born in Lancaster itself. If the remainder of Penn-

TABLE 5

PLACE OF BIRTH

Place	Number	Per Cent
Lancaster	55	31.8
Pennsylvania (other than Lancaster)	38	22.0
South (including Ala., Ga., Fla., N.C., S.C., Miss., Va.)	71	41.1
Washington, D.C.	2	1.1
Rest of United States	7	4.0

sylvania is included, fully half of the population are thus covered. However, almost all of the remaining half of the Lancaster Negro population were born in the South.

2. How many years have you lived in Lancaster?

TABLE 6

YEARS LIVED IN LANCASTER

Years	Number	Per Cent
Less than 1 year	7	4.2
1-5	15	8.9
6-10	17	10.1
More than 10	129	76.8

Over three-quarters of the Negro labor force in Lancaster have been there more than ten years. Apparently, a considerable portion of the Negro population of Lancaster has made Lancaster its home for a number of years. The hypothesis sometimes advanced to the research staff that large-scale Negro migration to Lancaster has been present in recent years does not stand up against this finding.

3. If you came to Lancaster as an adult, what brought you here?

TABLE 7

REASON FOR COMING TO LANCASTER AS AN ADULT

Reason	Number	Per Cent
Relatives	38	43.2
Friends	5	5.8
To seek employment	40	45.4
School	3	3.4
Military Service	1	1.1
Just roaming	1	1.1

The prime reasons advanced for coming to Lancaster, namely, relatives and employment opportunities, are fairly universal. Individuals tend to migrate toward family or employment.

4. Age.

TABLE 8

AGE

Age	Number	Per Cent
14-19	6	3.5
20-24	22	13.0
25-34	41	24.1
35-44	46	27.1
45 and over	55	32.3

The age distribution of the Lancaster Negro population in the labor force yields two conclusions of analytical import.

(a) Approximately one-third of the Lancaster Negro population in the labor force are over 45. This means that planning any employment program for Negro members of the Lancaster work force must be based on the notion that a substantial proportion of this labor force are mature.

(b) The small number of young people in the sample is a source of wonder. The hypothesis, here, is that the young Negro tends to leave Lancaster and strike out for his future in larger metropolitan areas. This happens despite the fact that few areas in the entire country can compete with the health of the Lancaster labor market. The reasons for this out-migration of young Negroes are undoubtedly complex and varied. Probably present is the age-old desire of the young to break off from the family and see what the rest of the world is like. Nevertheless, the extremely low unemployment rate in Lancaster would normally be considered enough to discourage a good part of this migration. The fact that it does occur may mean that the young Negro believes, or has found, that there is discrimination in employment or that he is unqualified for existing openings, but further information on this subject is needed.

5. Marital status.

The information on marital status bears out the notion that the Negro labor force in Lancaster is a stable one. Almost 70 per cent of the Negro labor force are married. The small number of divorced

TABLE 9

MARITAL STATUS

Status	Number	Per Cent
Married	117	69.5
Single	25	14.9
Widowed	13	7.8
Divorced	4	2.4
Separated	9	5.4

and separated individuals is a correlative indication that the Lancaster Negro labor force has well-established roots. (It should be noted that these figures do not, of course, include those households headed by a female whose primary source of income is a public welfare grant.)

6. Sex.

TABLE 10

SEX

Sex	Number	Per Cent
Male	85	50.3
Female	84	49.7

The significant fact here is that there is virtually the same number of individuals of each sex in the Lancaster Negro labor force. This would be contrary to the general belief that the Negro male dominates the labor force. In point of fact, nationally, there are three employed Negro males for every two employed Negro females.[2]

EDUCATION

1. What was the highest grade that you completed in school?

TABLE 11

EDUCATION

Years Completed	Number	Per Cent
1	0	0.0
2	0	0.0
3	0	0.0
4	7	4.1
5	8	4.7
6	7	4.1
7	10	5.9
8	21	12.4
9	20	11.7
10	19	11.2
11	22	12.9
12	43	25.3
College		
1	5	2.9
2	2	1.2
3	2	1.2
4	2	1.2
5	2	1.2

The data show that approximately one-third of the Negro work force have a high school education or better. The median number of years of education is ten.

2. What was your major high school course?

TABLE 12

MAJOR COURSES – HIGH SCHOOL

Course	Number	Per Cent
General	54	69.2
Academic	6	7.7
Commercial	12	15.4
Vocational	4	5.1
Home Economics	2	2.6

This table shows that more than two-thirds of the Negro work force with at least some high school education studied the General course. This finding is important in view of the conclusions found in the study entitled "School Survey of Lancaster Negro and White Students." This study, dated December 18, 1963, was the product of a joint effort by the Board of Education of the School District of Lancaster and the staff of the Pennsylvania Human Relations Commission. The study published the following two relevant conclusions:

> For a much larger proportion of Negro students than white students, high school is the end of their formal schooling. However, a larger percentage of the Negro graduates than white graduates have been competing for employment without having completed the Commercial, Vocational or Distributive Education programs.
>
> In relation to the large number of Lancaster graduates who do secure employment in secretarial, retailing and industrial positions, very few Negro students have taken the relevant training. The majority of those who did take pre-college and vocational education were successful in securing placement appropriate to their training.

The Human Relations Commission study found that during a four-year period, as of three to six months after graduation, 42 per cent of *all* graduates went on to college or some kind of technical or career school, while the corresponding figure for Negro graduates was 8 per cent. The need for counseling toward a commercial or vocational curriculum seems evident.

3. What was your major college course?

TABLE 13

MAJOR COURSE – COLLEGE

Course	Number
Social Studies	3
Pre-Ministerial	1
Education	1
Music	1
Physical Education	2
Languages	1
Mathematics	1
Home Economics	1

This table summarizes the fields of college study represented by Negroes in the Lancaster work force. Unfortunately, the number of individuals covered is too small to permit any valid generalizations to be drawn.

4. What type of specialized training have you had in the armed forces, trade school, business school, or otherwise?

TABLE 14

SPECIALIZED TRAINING

Type Training	Number
Armed Forces	
Radio	2
Languages	1
Molding	1
Heavy Equip. Operation	8
Truck Driving	1
Music	1
Clerical	3
Cryptography	1
Special Svcs.	1
Airplane Mechanic	1
Trade School	
Barber School	1
Shoe Repair	1
Industrial Arts	1
Glass Blowing	1
Engineering	1
Auto Mechanic	3
Electronic Repair	1
Brick Layer	1
Plumber	1
Carpenter	1
Mechanic School	2
Business School	
Clerical – General	5
Accounting	1
Secretarial	2
Other	
Practical Nursing	7
Beauty Culture	2
Deck Hand Training	1
Registered Nursing	1
Dental Technician	1
Theological Seminary	1
Art School	1
Home Economics	1
Tailoring	1

This table shows a wide variety of experiences educationally. Most of the categories involve only one individual's being exposed to the specific type of training listed. However, there are three categories worthy of note. Eight individuals report training in heavy equipment operations. A total of eleven individuals have been exposed to clerical training in one form or another in either the armed forces or at a business school, and seven individuals have taken training as practical nurses.

WORK EXPERIENCE

1. What type of work have you done most of your life?

TABLE 15

RANGE OF OCCUPATIONS

Type of Occupation	Number of Individuals	Per Cent
Professional and Managerial	7	3.5
General Clerical	12	6.1
Sales Clerk	2	1.0
Building Service	12	6.1
Protective Service	2	1.0
Personal Service	29	14.7
Domestics	30	15.2
Medical Service	8	4.0
General Skilled Trades	5	2.5
Semi-skilled	8	4.0
Truck Driver	7	3.5
Heavy Labor	21	10.6
General Labor	45	22.7
Machine Operator	10	5.1

There are four categories here with more than twenty responses each: Personal Service, Domestics, Heavy Labor, and General Labor. These four categories cover unskilled labor basically and represent approximately two-thirds of the Negro labor force.

2. Are you currently employed?

TABLE 16
EMPLOYMENT AND UNEMPLOYMENT

	Number of Individuals	Per Cent
Employed	146	87.6
Unemployed	21	12.4

Unemployment in Lancaster generally, during the period of time the community questionnaire was being administered, was under 3 per cent of the labor force. The figure of 12.4 per cent for unemployment in the Negro community is thus quite high. Nationally, it is common for Negro unemployment to be approximately twice as great as the figure for the economy as a whole.[3]

3. What is your current occupation?

TABLE 17
TYPE OF WORK DONE CURRENTLY

Type of Occupation	Number of Individuals	Per Cent
Professional and Managerial	9	6.3
General Clerical	7	4.9
Route Salesman	2	1.4
Sales Clerk	3	2.1
Building Service	10	7.1
Protective Service	1	0.7
Personal Service	21	14.8
Domestic	24	16.9
Medical Service	7	4.9
General Skilled Trades	2	1.4
Semi-skilled	5	3.5
Truck Driver	3	2.1
Heavy Labor	11	7.8
General Labor	22	16.9
Machine Operator	13	9.2

As might be expected, the figures show essentially the same pattern as was found in the replies to the question on what type of work the individual has done most of his life. The smaller number of responses here is due to the fact that some individuals reported two occupations as most frequently performed in reply to Question

1. In addition, the replies to this question included only those currently employed. The basic finding that two-thirds of the positions filled by members of the Negro work force are unskilled remains unchanged.

4. How long have you been on your present job?

TABLE 18

NUMBER OF YEARS ON PRESENT JOB

Length of Time	Number of Individuals	Per Cent
Less than 1 year	27	22.0
1-3 years	21	17.1
4-5 years	11	8.9
Over 5 years	64	52.0

Once again, the research data bear out the hypothesis that the Negro labor force in Lancaster is highly stable. Over one-half of the individuals who replied to this question have been associated with their present employer for a period of more than five years.

5. Do you have any part-time job (s) or second full-time job in addition to your regular job?

TABLE 19

EMPLOYEES HOLDING SECOND JOB

	Number of Individuals	Per Cent
Yes	16	10
No	144	90

The extent of reported moonlighting does not seem to present any significant problems in terms of its effect on the labor force.

ASPIRATIONS

A series of questions were asked in an attempt to ascertain some of the job-oriented goals and aspirations of the individuals being surveyed. The investigation covered such areas as type of work desired, interest in training programs, and career goals for their children.

1. What kind of occupation would you most like to have?

TABLE 20

TYPE OF WORK DESIRED

Type of Work	Number of Individuals
Machine operator	22
General clerical	12
Practical nurse	10
Sewing	8
Any suitable	8
Automobile mechanic	5
Secretary	4
Social work	4
Teaching	3
Construction work	3
Switchboard operator	3
Fireman	3
Electronics and TV Repair	3
Inspection	2
Cook	2
Truck driver	2
Accountant	2
Molder	1
Funeral director	1
Maintenance work	1
Policeman	1
Registered nurse	1
Domestic	1
Electrician	1
Architect	1
Painter	1
Janitor	1
Laundry worker	1
Carpenter	1
Beautician	1
Relocation officer	1
Machinist trainee	1
Art illustrator	1
Computer operator	1
Retail merchant	1
Engineering aide	1
Gas company worker	1

There are two striking facts here. First, we notice the tremendous variety of positions in which individuals are interested. The second major finding is that the job goals and aspirations of the Negro labor force are generally moderate. Of the five categories most frequently mentioned (machine operator, practical nurse, general clerk, sewing machine operator, and "any suitable"), only the practical nurse requires any type of extended training.

One further fact worth highlighting is that approximately one-third of the respondents voluntarily advanced the information that they were satisfied with the type of work they were doing.

2. What possible reasons could you give that would prevent you from getting this type of occupation?

A list of possible responses was given to the individuals and they were asked to select as many replies as were appropriate for themselves. These results are presented in Table 21 below:

TABLE 21

BARRIERS TO OCCUPATIONAL GOALS

Barrier	Number of Individuals	Per Cent
Lack of ability	1	0.6
Lack of training and education	63	35.2
Lack of opportunities; not getting right breaks in life	12	6.7
Lack of any clear and positive aim in life	1	0.6
Family background	1	0.6
Class I am in	0	0.0
Race I am part of	17	9.4
My religion	0	0.0
Illness	1	0.6
Lack of financial support	20	11.1
None	58	32.4
Other	5	2.8

Replies to this type of question might be expected to revolve around such factors as race, religion, or perhaps even social class. It turns out the respondents put the emphasis on training and education.

The fact that the second largest group of respondents saw no barriers in the way of attainment of their goals is quite noteworthy.

This would seem to be related to the moderate aspirations reported by many of the individuals replying to the previous question.

3. Please tell me what you are doing or have done to help you get this occupation?

TABLE 22

ACTIVITIES TO ACHIEVE OCCUPATIONAL GOALS

Type of Activity	No. of Individuals
Made application to industry	17
Made application to employment service	2
Attended school	2
Now in training	5
Applied for training	4
Hard work on present job	1

The important fact here is the small number of replies. There is a gap between desire and effort.

4. Are you interested in participating in a job training program?

TABLE 23

INTEREST IN PARTICIPATING IN JOB TRAINING PROGRAM

Response	Number of Individuals	Percentage of Replies
Yes	103	62.0
Possibly	4	2.5
No	59	35.5

There is recognition of a need for training and a verbalized interest in participating in such programs by almost two-thirds of the individuals in the study.

5. If you had a son (or daughter) in school, what kind of occupation would you like him to have when he gets out of school?

TABLE 24

GOALS FOR CHILDREN

Career Goal	Number of Individuals
Child's choice	52
Nurse	15
Doctor	13
Undecided	9
Teacher	8
Lawyer	7
Secretary	5
White collar	3
Radio and TV repair	3
Armed services	3
Auto mechanic	3
Electronics	2
Engineer	2
X-ray technician	2
Accountant	2
Seamstress	1
Architect	1
Musician	1
Professional	1
Bookkeeper	1
Sports	1
Funeral director	1
Clerical	1
Medical secretary	1
Home economics	1

Although by far the greatest number of individuals responded by indicating that they felt this should be a matter of choice for the child, those respondents who specified occupations tended to list occupations with prestige. Among specific occupations listed, doctor, lawyer, teacher, and nurse were the ones most frequently mentioned. This is certainly in line with the American Dream and the universally expressed desire to have children reach beyond parents in attainment. The result is considered of consequence here from two points of view. First, individuals who replied by indicating modest goals for themselves definitely have higher-level ambitions for their children. Second, it is doubtful that many years ago

Negroes would have entertained these ambitions realistically for their children. There were simply too many barriers. Prejudice, finances, and schooling bars all made such goals unrealistic. The belief is that these goals are now being considered as meaningful by the Negro community because of the improved conditions for their attainment. Obviously, disappointment in this area will create a host of social problems.

6. What possible reasons could you give that would prevent him from getting this type of occupation?

TABLE 25

BARRIERS TO OCCUPATIONAL GOALS

Barrier	Number of Individuals	Per Cent of Replies
Lack of ability	0	0.0
Lack of training and education	28	16.4
Lack of opportunities; not getting right breaks in life	7	4.1
Lack of any clear and positive aim in life	0	0.0
Family background	0	0.0
Class I am in	1	0.6
Race I am part of	11	6.4
My religion	4	2.3
Illness	0	0.0
Lack of financial support	30	17.5
None	89	52.1
Other	1	0.6

Here the same table used in asking respondents about barriers to their own accomplishment was presented in connection with their aspirations for their children. The preponderance of replies in the "None" column is substantiation of the notion advanced above, namely, that Negro parents are quite serious in holding high expectations for accomplishment by their children. Again, this is a level of accomplishment to which they do not aspire for themselves.

EMPLOYER INTERVIEWS

Methodology

As indicated previously, a decision was made to interview the seventeen employers of approximately 500 employees each in the Lancaster urbanized area. The discussion which follows is based upon twelve interviews with respondent companies. Two companies declined to participate in the interviews, and time limitations made it impossible to conduct the remaining interviews.

The employers consenting to be interviewed participated freely and frankly. The interviewers were discussing a sensitive area and probing the subject of Negro employment in depth in many cases. Nevertheless, the companies generally gave every indication of wanting to place all facts on the table without any reservations.

The pattern of the interviews was highly informal, and no attempt was made to follow a structured interview under controlled conditions. For this reason, as well as the content of much of the questioning, the information here must be considered as highly subjective data. Nevertheless, the research group became convinced that many important observations were to be found in these interviews. Since the promise of anonymity can be maintained, the findings of these interviews are summarized below:

Findings

1. *Applicants.* In questioning the presence or absence of Negro applicants, transportation loomed large. The Lancaster Negro simply does not go very far to look for his work. Here, the automobile seems to be tremendously important. Lancaster plants not easily accessible other than by car generally report fewer Negro applicants. Employers outside a radius of approximately seven miles reported Negro applicants to be rare.

Employers noted that a successful Negro applicant for employment generally tends to produce an immediate response from the Negro community of additional Negro applicants. This apparently happens as word spreads through the Negro community that an individual has been placed with a given company.

Interestingly, in a number of cases where the charge of discrimination has been leveled, it has been against those employers with the best record in terms of hiring Negroes. There was some employer complaint that "pioneering" carried a high price, as Negroes were attracted to a company with a reputation for good hiring practices. Inevitably, a certain number of unqualified Negroes would become disaffected upon rejection.

Employers also report that it is difficult to find a satisfactory way to notify the Negro community of openings. Generally, it is felt that Negroes should be notified through the same media as the white community. However, in those instances where employers deliberately wanted to contact Negro applicants, they felt word of mouth or other referral techniques to be weak.

2. *Type of Jobs Available.* As seen previously, a high proportion of the jobs to be filled are at the bottom of the employment scale. In good part, this is due to the fact that skill needs require Lancaster employers to hire at the bottom and then upgrade their work force. In some cases, this is due to the pressure of a union contract calling for plantwide posting of openings. In-plant employees have an opportunity to bid for open positions before the employer hires anyone from the outside.

3. *Employment Standards.* Employers report, as above, that they maintain high standards for positions which, in and of themselves, do not require such high standards. Frequently the entry wage is considerably higher than the wage which needs to be paid to hire applicants competent to handle the entry position. Employers report that these high wage rates for relatively low-level positions make it imperative that they hire competent people. Failing this, the pipeline for upgrading would dry up, and the entry jobs would become dead-end barrier jobs. Employers note that insistence upon a high-school education and/or administration of a battery of aptitude tests have best enabled them to maintain these standards.

Employers also report that testing has enabled them to offer objective evidence to explain rejection of an inadequately qualified Negro applicant who charges discrimination. Employers report that this situation has been rare.

In terms of meeting standards, disappointment is voiced at the lack of preparation of Negro applicants.

4. *Negroes as Employees.* A number of industrial organizations report similar findings. Negroes, particularly those with a *minimum* of previous industrial experience, tend to be poor to fair employment risks. Work attitudes and absenteeism are the principal problems. However, the same concerns report that, given time — and here employers talk in terms of time periods in excess of normal probationary periods — these employees blend into the work force with work records not significantly distinguishable from those of analagous white employees.

Few experiences can be cited with Negroes in professional or managerial positions. When such situations were reported, the employers would indicate that the problem of a Negro with professional background lies largely in the housing area. Some highly qualified Negroes had come and gone from Lancaster because of an inability to find housing outside the Seventh Ward Negro ghetto area.

5. *The Attitude of White Employees toward Negro Employees.* Unanimously, employers find that white employees easily accept Negro employees. Although few Negro professionals are covered in the study, they were reported as being completely accepted in the work setting. Many organizations, particularly those pioneering in placing Negroes in positions heretofore not held by Negroes in their organizations, felt real trepidation before hiring Negroes. They were later delighted and gratified to find that the problem of attitudes on the job was largely a straw one.

6. *Negroes with Clerical Skills.* One fascinating result of the interviews was the discovery that many employers were simultaneously looking for Negro typists and stenographers. In many cases a decision was made to find qualified Negro clerical applicants. Such decisions were being made independently but concurrently by a number of different concerns. Unfortunately, the number of Negro girls with the appropriate skills was pathetically small. Some employers ranged far and wide in their search. Few were able to resolve it successfully. There is apparently a time lag between realization of the existence of this demand and the overt guidance and direction given Negro girls to prepare themselves for stenographic work.

7. *Discrimination in Favor of Negroes.* A very sensitive question was explored with a number of employers. In essence, the question asked was whether they felt that Negroes should be treated on the basis of complete equality with all other applicants or whether they should be given some preferential treatment in recognition of the fact that there had been discrimination against them nationally in many ways. Most employers feel that Negroes deserve full and equal treatment but that anything further represents a form of discrimination in reverse, which is completely unfair to the white applicant with a more appropriate background who might be rejected in favor of a Negro.

A minority position exists which says, in effect, that although we are not going to hire unqualified Negroes, we recognize that there is a circle of interaction of schooling, housing, and employment standards which makes it difficult for the Negro to obtain employment. Accordingly, we recognize a *range* of qualifications which is acceptable for positions. As long as Negroes meet the qualification range, we will consider hiring them. In other words, this group would consider hiring a Negro with lesser skills than a white applicant, provided the Negro possessed at least minimal qualifications for the job, and Negro employees were scarce in the organization.

SUMMARY

The Negro Labor Force in Lancaster

Stability. The Negro labor force in Lancaster is highly stable. It is dominated by individuals either born in Lancaster or resident there for ten years or more. This is not a group of recent migrants who are unfamiliar with Lancaster. These are people oriented toward Lancaster. On frequent occasion, respondents indicated that they considered Lancaster their permanent home and further that they liked life in Lancaster. Additional evidence of stability is the high percentage of married individuals in the Negro labor force.

Age and Sex. The survey group showed a surprising proportion of females in the labor force – approximately one-half. The age distribution showed both a small number of young Negroes in the labor force and a sizable proportion of individuals over 45 (approximately one-third of the group).

Education and Training. The median number of years of school for the group was ten. In addition, a number of individuals reported further training in trade, service, and other schools. In approximately 70 per cent of the cases, members of the Negro work force reported studying the high-school general curriculum. Only 5 per cent reported majoring in a vocational field – this despite the clear record that high school or a portion thereof was the terminal formal educational experience for a majority of the group.

Type of Work Performed. Although Negroes can be found in virtually all types of jobs and professions, there is little question that the group in Lancaster is dominated by individuals holding unskilled positions. Approximately two-thirds of the individuals surveyed are in positions of this type. One interesting survey result was the corollary finding and its relationship to education: One-third of the Negro work force in Lancaster are holding positions above the unskilled level, and this is precisely the percentage of individuals in the Negro labor force who are at least high-school graduates.

Unemployment Rate. Precise figures on the incidence of Negro unemployment in Lancaster have been unavailable up to now. This study with its broad-based sample, however, has revealed a strikingly high unemployment rate of 12.4 per cent. This is a figure which is four times the rate for unemployment in Lancaster generally.

Aspirations and Interest in Training. It was interesting to find that goals expressed by members of the Negro work force were moderate for themselves. Conversely, goals for their children were high. They generally felt that race was of less importance as a barrier to employment than the lack of training and education. There was a natural correlation here in that almost two-thirds of the Negro labor force proceeded to express interest in training programs which would permit them to either obtain other employment or upgrade themselves somewhat in their present employment.

Employer Hiring

Type of Hiring. One of the most remarkable findings in the survey of employer hiring patterns was the large number of individuals hired for essentially unskilled openings. Although the percentage of unskilled openings fell from approximately 50 per cent of all new hires to some 40 per cent of new hires between 1963 and 1964 (including projections for the second half of 1964), the fact remains that Lancaster is continuing to find a large number of unskilled positions open. It is the single most important fact about hiring in Lancaster.

Number of Openings. The employers in the sample covered approximately one-fourth of all employment in the labor market in a seven-mile radius from Lancaster. These employers reported a total of some 2,120 openings in 1963. The Lancaster labor market is, from all indications, generally healthy and active. Coupled with the relatively low turnover rates reported by county employers, this indicates that the bulk of job openings was probably attributable to economic growth.

Communication with the Negro Community. Employers consistently report that it is difficult to contact the Negro community on employment problems affecting Negroes. Although a majority of employers feel that direct contact for purposes of preferential hiring is undesirable, they almost all would like a professional source of aid within the Negro community which might be consulted on employment problems affecting Negroes.

Hiring Standards. Lancaster employers consistently report high hiring standards, even for entry positions. In many cases the standards are a product of special considerations such as the shortage of skilled personnel requiring internal upgrading of the unskilled. In other cases, entry wage scales dictated by contractual terms have been set so high that employers strive to obtain well-qualified individuals for the high rates. This means, essentially, that employees may accept work below their skill levels because the rates paid are satisfactory. Employers use such overqualified individuals in entry jobs as a source of talent for promotion-from-within policies. The fact that there is a logical basis for the situation does not alter the fact that it does operate to bar a substantial number of Negroes from positions which they are qualified to perform but whose formal qualifications they cannot meet. Full understanding of this problem was found among some employers who were reluctant to change the situation for practical reasons. They reported that if entry jobs were given to individuals qualified to perform the specific jobs, but lacking qualifications to go beyond, their promotion-from-within policies would have to be altered substantially or discarded.

Negroes as Employees. Employers reported that Negroes found little in the way of barriers to acceptance in the work force. A number of employers who had hired Negroes either for the first time or in positions new to Negroes for their companies reported that many of the anticipated problems turned out to be of apparently little consequence. More serious, they felt, was the reaction of the Negro employees themselves. They reported that a number of Negro employees adopted bad habits in terms of absenteeism and work standards. Employers who declined to accept any such form of behavior promptly discharged the Negroes involved. Employers who chose to persevere with some of these marginal employment situations reported real progress, but time periods in excess of normal probationary period standards were required. They felt strongly that a greater amount of self-discipline and self-policing was necessary for some members of the Negro work force.

The Clerical Situation. There was a finding here which warrants special consideration. Employer after employer indicated interest in hiring Negro secretaries, stenographers, and typists. In some cases this interest was limited to a hope that qualified Negroes in these categories would turn up. More often, however, the employer made a number of efforts to find such individuals. Inevitably, the efforts were doomed to failure simply because of the small number of Negro girls possessing the necessary skills. The question of communicating employer interest in these skills to the Negro school community and translating it into effective counseling is clearly important.

A Final Word

In our examination of the small but growing Negro labor market in Lancaster, Pennsylvania, a number of salient facts have been uncovered and reported above. It is noteworthy that many of the findings resulted in overturning what might be termed "conventional wisdom." It is precisely in offering facts rather than social myth that a baseline for useful and viable programs can be constructed.

The methodology employed in this study utilized a three-pronged approach, i.e., simultaneously studying characteristics of the Negro labor force, the demand for labor generally, and employer experience with minority groups. It seems clear that similar comparative studies in other labor markets can offer considerable insight into some of the pressing problems of the Negro labor force.

APPENDIX TABLES

Appendix A-1

OCCUPATION OF EMPLOYED NEGROES, BY SEX 1960, UNITED STATES

Major Occupation Group	Male		Female	
	Number (in thousands)	Per Cent	Number (in thousands)	Per Cent
Total employed	3,643.9	100.0	2,455.1	100.0
Professional, technical, and kindred workers	112.7	3.1	175.3	7.1
Farmers and farm managers	154.2	4.2	14.5	0.6
Managers, officials, and proprietors, except farm	63.2	1.7	24.8	1.0
Clerical and kindred workers	178.9	4.9	181.7	7.4
Sales workers	46.7	1.3	36.1	1.5
Craftsmen, foremen, and kindred workers	356.6	9.8	15.9	0.6
Operatives and kindred workers	887.4	24.4	310.2	12.6
Private household workers	27.3	0.7	888.2	36.2
Service workers, except private household	507.9	13.9	519.8	21.2
Farm laborers and foremen	256.7	7.0	69.5	2.8
Laborers, except farm and mine	745.0	20.4	23.6	1.0
Occupation not reported	307.3	8.4	195.5	8.0

Note: Detail may not add to totals because of rounding.
Source: U. S. Department of Commerce.

Appendix A-2

UNEMPLOYMENT RATES, BY COLOR, SEX, AND AGE 1963, UNITED STATES

Sex and Age	White	Nonwhite
Male		
All Age Groups	4.7	10.6
14 to 19 years	14.2	25.4
20 to 24 years	7.8	15.6
25 to 34 years	3.9	9.5
35 to 44 years	2.9	8.0
45 to 54 years	3.3	7.1
55 years and over	4.1	8.0
Female		
All Age Groups	5.8	11.3
14 to 19 years	13.6	33.1
20 to 24 years	7.4	18.8
25 to 34 years	5.8	11.7
35 to 44 years	4.6	8.2
45 to 54 years	3.9	6.1
55 years and over	3.4	4.6

Appendix A-3

UNEMPLOYMENT RATES OF EXPERIENCED WORKERS[1] BY COLOR AND OCCUPATION, 1963, UNITED STATES

Major Occupation Group	White	Nonwhite
All occupation groups[2]	4.4	9.3
Clerical and sales workers	3.9	7.4
Craftsmen and foremen	4.6	8.2
Operatives	6.9	11.1
Private household workers	3.1	7.7
Other service workers	5.3	10.0
Farm laborers and foremen	5.0	7.1
Laborers, except farm and mine	11.0	15.2

[1] The base for the unemployment rate includes the employed, classified according to their current jobs, and the unemployed, classified according to their latest civilian job, if any; excludes unemployed persons who never held a full-time civilian job.

[2] Includes the following groups not shown separately: Professional and technical workers; managers, officials, and proprietors; and farmers and farm managers.

Appendix A-4

THE COMMUNITY QUESTIONNAIRE

1. In what community (city, town, village) and state were you born?

(Community, city or town) (State)

2. How many years have you lived in Lancaster?
3. If you came to Lancaster as an adult, what brought you here?
4. When were you born?

(Month) (Day) (Year)

5. At the present time, are you . . .
    1. Married
    2. Single
    3. Widowed
    4. Divorced
    5. Permanently Separated
6. Sex: Male Female
7. What was the highest grade that you completed in school?

None	0
Grade School	1 2 3 4 5 6 7 8
High School	1 2 3 4
College or University	1 2 3 4 5 or more

8a. Are you going to school now? 1. Yes 2. No

8b. If yes, what are you studying?

9. What kind of work have you done most of your life? Please give me the title and a full description of the job.

10. Are you currently employed? 1. Yes 2. No
    If yes, skip to question 14. If no, ask – are you looking for work? 1. Yes 2. No.
    If yes, continue the interview. If no, discontinue the interview.

11. Did you work at all the past twelve months? 1. Yes 2. No
    If yes, skip to question 13.

12. How come you didn't work at all during the past twelve months?
    1. Sick
    2. Unemployed
    3. Armed Services
    4. Other (specify)

    If Armed Services, change question 10 to yes and skip to question 14 and record Armed Services. Go to 17.

13. What was the last full-time occupation you had? Please give me the title and a full description of the job. Go to 17.
14. What is your current occupation? Please give me the title and a full description of the job. How long have you worked at this job?
15. Have you had any part-time job or second full-time job in addition to your regular job last year? 1. Yes 2. No
16. What kind of work was this?
17. What kind of occupation would you most *like* to have? Consider your present, full-time or past-time occupation, or any other work you have held of would like to hold.
18. What possible reasons could you give that would prevent you from getting this kind of occupation?
    1. Lack of ability
    2. Lack of training and education
    3. Lack of opportunities; not getting right breaks in life
    4. Lack of any clear and positive aim in life
    5. Family background
    6. Class I am in
    7. Race I am part of
    8. My religion
    9. Own ambitions and high goals I have set for myself
    10. Illness
    11. Lack of financial support
    12. None
    13. Other (Specify)
19. Please tell me what you are doing or have done to help you get this occupation.
20. Are you interested in participating in a job training program?
    1. Yes 2. Possibly 3. No
    If yes, or possibly, answer questions 21 and 22.
21. What type of job training program would interest you?
22. How many months would you be willing to spend in such a program? ——————————
23. If you had a son, of at least normal intelligence, what kind of occupation would you *like* him to have when he gets out of school?
24. In your opinion, what could prevent him from obtaining this occupation?
    1. Lack of ability
    2. Lack of training and education
    3. Lack of opportunities; not getting right breaks in life
    4. Lack of any clear and positive aim in life
    5. Family background
    6. Class I am in
    7. Race I am part of
    8. My religion
    9. Own ambitions and high goals I have set for myself
    10. Illness
    11. Lack of financial support
    12. None
    13. Other (Specify)

18

LANCASTER STUDY IMPLICATIONS

Walter J. Gershenfeld*

The central facts of analytical import in the Negro labor market in Lancaster, Pennsylvania are (1) the high level of unemployment among Negroes and (2) the existence of a substantial demand for unskilled labor. To understand these seeming anomalies, we will first examine the structure of unemployment and employment in Lancaster. Following, the Lancaster supply of labor will be investigated to determine significant trends, particularly with regard to demographic factors. Finally, the pieces will be assembled to look at the problem of the Negro in a prosperous community. Emphasis will be placed on the composition of labor demand in a healthy economic setting such as Lancaster and on the competitive effect of the nature of the labor supply on the Negro's job opportunities.

THE STRUCTURE OF UNEMPLOYMENT

Unemployment can be said to have a structure. That is, it is capable of being analyzed by geographic region, by industry, by sex, by age group, by color, and in many other ways. Analysis today takes place against a backdrop of persistent, relatively high unemployment nationally in the last decade.[1] Causes of this high unemployment include, *inter alia,* a structural component which has been defined by Albert Rees as follows:

> By structural unemployment, I shall mean persistent unemployment caused by automation and other forms of technological change, by shifts in the composition of demand, and by the competition of imports with domestic production. I shall also include in structural unemployment any persistent unemployment due to changes in the structure of wages in relation to the pattern of labor demand.[2]

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Rees's reference to "changes in the structure of wages in relation to the pattern of labor demand" was probably made with an eye toward legislated minimum wages. In Lancaster, another wage-structure phenomenon is operative: the prevalence among employers of high entry wages, which have resulted in relatively high job standards for entry positions. These standards, which frequently cannot be met by Negroes, may then be considered a cause of structural unemployment among Negroes in Lancaster.

It is instructive at this point to look at the composition of the unemployed in Lancaster as shown by the application files of the Lancaster State Employment office at the end of May, 1964. The structure of the unemployed in Lancaster, as shown in Table 1, both parallels and differs from national unemployment data and Negro unemployment data in Lancaster in some striking ways.

First, there are more women than men among the insured unemployed in Lancaster. The national figures generally show five unemployed males for every three unemployed females. It is recognized that female employment and consequently unemployment are functions of female labor force participation rates. These in turn may be related to both the vigor of the labor market and the composition of employment opportunities in the labor market. In the case of Lancaster, there is no question about the health of the economy, and the employment pattern found in Lancaster is not unlike that of our national economy. Accordingly, the high female unemployment rate is something of an anomaly. The Negro community survey also showed an exceptionally high female unemployment rate.

The author will refer, at a later point in this paper, to data concerning labor force participation rates in communities with generally low unemployment rates such as are found in Lancaster. In this connection, the Director of the Bureau of Employment Security Research for the Employment Security Commission of North Carolina reported the following:

> The current sex distribution of the labor force is not available; however an estimate was developed using approximately the same male-female distribution that existed in the 1960 Census. These distributions, based on 1960 data, may be slightly conservative since female participation in the labor force has been on the increase and this trend is expected to continue. Additional analysis of available information, that may provide further insight into the amount of labor force participation by sex, indicates that approximately 57 per cent of the total unemployment, as submitted on our official U. S. Department of Labor ES 219 report for Greensboro-High Point during 1963, were females. However, insured unemployment records indicate that nearly 62 per cent of the jobless filing claims in that area in 1963 were women.

> Employmentwise, women made up only about 36 per cent of the nonagricultural workers during 1963, while according to the 1960 Census (based on an April enumeration) around 39 per cent of total employment was female.[3]

The Greensboro-High Point, North Carolina area is similar to Lancaster in both size and the vigor of its economy. It is interesting to find that women comprise about 35 per cent of the labor force yet represent about 60 per cent of the unemployed.

It must be recognized that the measurement of unemployment among nonwhite females is an extremely difficult task. Data for domestics (888,000 strong and representing 36.2 per cent of employed nonwhite females according to the 1960 Census), along with other self-employed persons, are estimated. The estimate is derived by using a formula based on the fact that a relative change in "wage and salary employment" is accompanied by a proportionate change in "all other employment."[4] Adjustments are made to the data for atypical situations.

As Ewan Clague, Commissioner of Labor Statistics for the U. S. Department of Labor, recently noted, "The labor force is a fluctuating, pulsating, variable body of workers."[5] In addition, the official definition of unemployment includes those who "believed no work was available in their line or in the community."[6] *Unemployment,* then, is not only a condition of being, but just as much an attitude or state of mind. Decisions on withdrawal from and entry into the labor market are at times subject to momentary impulse. Considering the tenuous attachment of many females to the labor force, data on their employment status are difficult to measure adequately.

Second, an analysis of the unemployed in Lancaster by type of background shows one-third of the unemployed to be unskilled. This is not a figure which is surprising and is, in fact, in line with national norms. The semiskilled figure, too, is not unusual. On the other hand, however, the fact that 20.6 per cent of male unemployment is skilled is somewhat novel. The explanation for this seems to be that almost one-half of the male skilled unemployment is composed of craftsmen over 65. It is quite probable that many of these individuals have been retired under the terms of collective-bargaining agreements.

Third, there are few young people among the Lancaster unemployed generally. This finding is analogous with the evidence showing few young Negroes in the labor force. Finding a low unemployment figure for the very young may reflect the fact that they have chosen to leave the community. In the case of the Negro, outmigration may occur because the young Negro believes, or has

TABLE 1

COMPOSITION OF THE UNEMPLOYED, LANCASTER, MAY, 1964

Primary Skills	Numerical Distribution			Percentage Distribution		
	Total	Male	Female	Total	Male	Female
Professional & Managerial	126	100	26	5.3	8.4	2.2
Clerical	304	81	223	12.7	6.8	18.6
Sales	114	47	67	4.8	3.9	5.6
Domestic	47	0	47	2.0	0.0	3.9
Other Service	248	139	109	10.4	11.6	9.1
Agricultural	36	34	2	1.5	2.9	0.2
Skilled	304	246	58	12.7	20.6	4.9
Semiskilled	477	199	278	19.9	16.7	23.2
Unskilled and Entry	735	348	387	30.7	29.1	32.3
Total, May 1964	2391	1194	1197	100.0	100.0	100.0
Total, March 1964	2858	1637	1221			
Total, May 1963	2326	1315	1011			

	Age Distribution									
	Males					Females				
Primary Skills	Total	Under 22	22-44	45-64	65 & Over	Total	Under 22	22-44	45-64	65 & Over
Prof. & Managerial	100	4	43	30	23	26	11	14	9	2
Clerical	81	12	39	12	18	223	30	131	37	25
Sales	47	4	11	17	15	67	10	21	28	8
Domestic	0	0	0	0	0	47	9	27	10	1
Other Service	139	16	31	45	47	109	14	52	30	13
Agricultural	34	5	20	9	0	2	2	0	0	0
Skilled	246	3	61	66	116	58	4	31	15	8
Semiskilled	199	21	96	48	34	278	28	145	79	26
Unskilled and Entry	348	110	135	59	44	387	69	222	75	21
Total	1194	175	436	286	297	1197	167	643	283	104
% Distribution	100.0	14.7	36.5	23.9	24.9	100.0	14.0	53.7	23.6	8.7

	Age Distribution, Both Sexes				
	Total	Under 22	22 to 44	45 to 64	65 and Over
Number	2391	342	1079	569	401
Per cent	100.0	14.3	45.1	23.8	16.8

Source: Lancaster Office of Pennsylvania State Employment Service.

TABLE 2

TOTAL CIVILIAN WORK FORCE, UNEMPLOYMENT AND EMPLOYMENT BY INDUSTRY, LANCASTER COUNTY 1950 AND 1963 ANNUAL AVERAGES*

Employment Status and Industry	1950 (In thousands)	1963 (In thousands)	Net Change	Per cent Change
Total Civilian Work Force	107.1	124.1	+1700	+15.9
Total Unemployment	3.6	4.0	+400	+11.1
% Civilian Work Force	3.4%	3.2%	—	—
Total Employment	103.5	120.1	+16,600	+16.0
Farm Employment	13.1	10.8	—2300	—17.6
Nonfarm Employment	90.4	109.3	+18,900	+20.9
Self-employed, Unpaid Family and Domestic Workers	10.5	11.4	+900	+8.6
Nonfarm Wage and Salary Employment	79.9	97.9	+18,000	+22.5
All Manufacturing Industries, Total	42.1	48.0	+5900	+14.0
Durable Goods Industries, Total	22.5	28.1	+5600	+24.9
Stone, clay, and glass products	1.7	2.0	+300	+17.6
Primary metals	0.8	2.1	+1300	+162.5
Fabricated metal products	3.8	5.0	+1200	+31.6
Machinery and transportation equipment	6.4	10.0	+3600	+56.3

Other durable goods	9.8	9.0	−800	−8.2
Nondurable Goods Industries, Total	19.6	19.9	+300	+1.5
Food products	3.9	4.4	+500	+12.8
Tobacco products	1.2	0.8	−400	−33.3
Textile products	3.8	1.9	−1900	−50.0
Apparel and related products	5.5	6.1	+600	+10.9
Printing and publishing	1.3	1.9	+600	+46.2
Leather products	3.0	3.1	+100	+3.3
Other nondurable goods	0.9	1.7	+800	+88.9
All Nonmanufacturing Industries, Total	37.8	49.9	+12,100	+32.0
Contract construction	4.4	4.8	+400	+9.1
Transportation and public utilities	4.9	4.8	−100	−2.0
Wholesale and retail trade	13.2	17.1	+3900	+29.5
Finance, insurance, and real estate	1.6	2.3	+700	+43.8
Service and miscellaneous	8.1	12.7	+4600	+56.8
Government	5.6	8.2	+2600	+46.4
Federal government	1.8	1.5	−300	−16.7
State and local government	3.8	6.7	+2900	+76.3

Source: Pennsylvania Department of Labor and Industry, Bureau of Employment Security, *Labor Market Letter, Lancaster Area,* Vol. XIV, No. 4, April, 1964, Table 4.

*Manufacturing industry averages are based on data for monthly periods. All other averages are based on bi-monthly estimates for 1950 and monthly estimates for 1963.

found, that there is discrimination in employment or that he is unqualified for existing openings. It is worth noting that among young males, unemployment is dominated by the unskilled and entry category.

THE STRUCTURE OF EMPLOYMENT

The National Picture

According to the United States Department of Labor,[7] major structural changes in the industrial and occupational distribution of employment are indicated in the manpower projections for the next decade. Agricultural employment, under the spur of rising productivity, is expected to decline by some 100,000 employees. Among nonfarm industries, those furnishing services are expected to rise more rapidly than the goods-producing industries.

It is expected that the fastest growing occupations during the next decade will be professional and technical, along with clerical and sales occupations. Among manual positions, it is only the most skilled occupations that will maintain a growth rate as large as that for total employment. Semiskilled opportunities will expand at a rate only two-thirds of that of total employment. However, much of the growth expected in semiskilled occupations will take place in the service industries, particularly the rendering of personal services. Unskilled workers will number about the same as today, resulting in a continued lowering of their proportional share of employment opportunities.

In manufacturing, where the growth is expected to be modest, the increase will be dominated by professional, administrative, clerical, and sales occupations.

In essence, both the industry and occupational trends now foreseeable point to a continuing shift in the demand for labor. Increasingly, employers are expected to be demanding workers possessing more education and greater skill.

The Lancaster Picture

The picture shown by Table 2 coincides with the national picture of changing employment opportunities by industrial classification.

These data clearly show the decline in farm employment both absolutely and relatively in Lancaster. The growth in manufacturing has been moderate and is, in fact, slightly less than the growth of the labor force in Lancaster. The increase in manufacturing has been largely concentrated within the durable-goods categories with emphasis on machinery and transportation equipment, primary metals and fabricated metal products.

The increase in nonmanufacturing industries has been substantial. Indeed, in the thirteen-year period in question, percentagewise it has doubled the increase in the labor force. The increase is almost entirely due to growth in wholesale and retail trade, services per se and the expansion of state and local government as a factor in the labor market.

Thus, from the point of view of the recent past, Lancaster exhibits labor-market growth patterns by industry which are substantially in accord with the Labor Department predictions for the decade ahead.

In analyzing the occupations of the employed, the only data available are from the 1960 Census. These data show the following:

TABLE 3

OCCUPATIONS OF THE EMPLOYED
LANCASTER COUNTY, 1960

Type of Occupation	Number	Per Cent
Professional, Technical, and Kindred Workers	10,214	9.0
Farmers and Farm Managers	5,733	5.1
Managers, Officials, and Proprietors (excluding farm)	7,240	6.4
Clerical and Kindred	12,642	11.2
Sales Workers	8,041	7.1
Craftsmen, Foremen, and Kindred	16,848	14.9
Operatives and Kindred	28,766	25.4
Private Household Workers	2,311	2.1
Service Workers (excluding private household workers)	8,170	7.1
Farm Laborers and Foremen	3,397	3.0
Laborers (excluding farm and mine)	5,335	4.7
Occupations not Reported	4,543	4.0
Total	113,240	100.0

Source: U. S. Bureau of the Census, *U. S. Censuses of Population and Housing: 1960, Census Tracts, Lancaster, Pa.* (Washington: Government Printing Office, 1962).

Probably the most noteworthy figure is the entry for operatives and kindred. Although this is the largest single group among the

Lancaster employed, it is precisely the group most likely to decline in number should Lancaster continue to follow national labor-market trends. This is likely in view of the fact that some of the largest manufacturers in Lancaster report considerably greater production today with fewer employees than were present in their plants a decade ago.

Thus, a review of the Lancaster employment situation shows a balanced economy, which by industry is following national trends rather closely. By occupation, however, there are some problems in that the unskilled and semiskilled operative and kindred group, now so numerous, may be expected to be a declining force. To be sure, although the category as a whole may be reduced, there will always be specific occupations which resist the trend and represent growth opportunities. The above represent reasonable hypotheses, barring the unexpected. In this connection, the lack of migration to such a healthy area stands out as a source of wonder. It may be questioned whether the low migration pattern will continue into the future as Lancaster's healthy industrial climate becomes increasingly well known.

Demographic Factors

The single most important fact about the age composition of the Lancaster Negro population emerging from the 1960 Census is the fact that 26.4 per cent of all Negroes were under ten years of age. Today, this same group is aged 4 to 14, and some are getting close to labor-market entry. This is almost entirely a native-born population and, given Lancaster's continued prosperity and the general interest prevalent in nondiscriminatory hiring, is more likely to seek its fortune in Lancaster than elsewhere.

The influence of this group of young people on the median age in Lancaster is quite dramatic. For Lancaster generally, the median male age in the 1960 Census was 30.8 years of age, while the median female age was 34.8. The corresponding figures for the nonwhite population were 23.7 for males and 22.5 for females. These, of course, are low because of the Negro population explosion, which will reach the Lancaster labor market in the not-very-distant future. Underscored is the need for better counseling and training programs for Negro youth if the difficulties other communities have experienced with regard to fair-employment problems are to be avoided in Lancaster.

The problem of the Negro young is highlighted by the fact that Lancaster is somewhat unique in not facing a deluge of the young.

Although there are increases of 0.6 per cent and 1.8 per cent in

TABLE 4

POPULATION BY AGE GROUPS, LANCASTER COUNTY
1960 AND MEDIUM PROJECTIONS TO 1970

Age Group	1960	Per Cent	1965	Per Cent	1970	Per Cent
Preschool (0-4)	31,338	11.2	34,280	11.4	38,704	11.8
School (5-19)	74,607	26.8	84,934	28.2	93,918	28.6
Younger Working Age (20-44)	89,075	32.0	92,292	30.6	98,342	29.9
Older Working Age (45-64)	55,220	19.9	59,414	19.7	64,083	19.5
Retired (65+)	28,119	10.1	30,455	10.1	33,486	10.2
Total	278,359	100.0	301,375	100.0	328,533	100.0

Source: Lancaster County Planning Commission, *The Past, Present, and Future Population of Lancaster County, Pennsylvania*, August, 1962.

the preschool and school categories, there is actually a decrease of 2.1 per cent expected in the younger working group. This, of course, is precisely the opposite of the pattern to be expected in the Negro community.

Lancaster, then, will in general face fewer special problems associated with young workers than the rest of the country. However, it will have an above-average problem ahead, at least in terms of numbers, with its young Negro population.

THE NEGRO IN A LOW-UNEMPLOYMENT COMMUNITY

One of the most puzzling aspects of this study to all participants has been the finding of high unemployment among Negroes in Lancaster. This is contrasted with the generally high level of economic activity in Lancaster and an unemployment rate ranking Lancaster among a select small group of labor markets averaging less than 3 per cent unemployment.

Typical sources of employment difficulty for Negroes can be found in the Lancaster labor market. The skill levels possessed by the Negro population are not high enough to qualify for the majority of open positions. Our subjective analysis of interviews with employers reveals that some open prejudice against Negroes exists. It is believed, however, that the amount of discrimination found is no greater than that which can be witnessed in other labor markets.

In addition, there is a narrow geographical area, a radius of approximately seven miles from the center of Lancaster, in which the Negro conducts his search for employment.

The sole source of data showing unemployment figures separately for both Lancaster City and Lancaster County is the 1960 Census. The following rather striking figures emerge:

TABLE 5

UNEMPLOYMENT AS PERCENTAGE OF CIVILIAN LABOR FORCE

Location	Per cent	
Total Lancaster County		2.6
Lancaster City	4.1	
Balance of Lancaster County	2.1	

In 1960, there was a substantial difference between unemployment rates in city and county areas. Although existing labor-market data do not permit us to ascertain whether this trend has continued, it does suggest an explanation of high Negro unemployment. With all of his other disadvantages, the Negro is competing in the worst part of a good labor market.

These reasons for Negro difficulty in Lancaster are important but appear insufficient to explain the high rate of Negro unemployment in Lancaster. Similar barriers exist around the country. Why then should Negro unemployment be high in this area of otherwise low unemployment?

Two principal reasons will be advanced below: the first, from the point of view of demand; the second, from the point of view of supply. The first revolves around continual prosperity in Lancaster having the effect of forcing employers to accept unskilled labor when they would prefer greater skills. Therefore, they maintain high general entry standards to improve the prospects of internal upgrading of the work force. The second reason is a competitive hypothesis, which notes that the increased labor force participation rate in Lancaster calls forth additional entrants to the labor force who are better equipped than the Negro in the job search.

The Nature of the Demand for Labor in Lancaster

Undoubtedly, the most important single fact about the demand for labor in Lancaster is the prevalence of unskilled positions among employment openings in both 1963 and 1964. Unskilled workers filled 40.6 per cent of openings in 1963, while 34.7 per cent of 1964 openings went to the unskilled. These figures are subject to upward revision when an additional 5 to 10 per cent unskilled are added from the service occupations.

At the time of the study, this finding was greeted with considerable surprise. We have become indoctrinated to the demise of unskilled labor in our economy. Labor Department estimates for the decade ahead predict that unskilled labor and farm labor are the only major employment categories which are not expected to show an absolute rise in numbers. Considering the rapid growth of the population, this means that unskilled labor may be expected to lose considerable relative ground to such categories as professional, technical, and clerical.

Here we have the possibility that a high-employment economy such as Lancaster's may find it necessary to use greater numbers of the unskilled than other labor markets. It has been only recently that support for this notion has developed nationally. It is related to the fact that we are currently nearing an almost unparalleled fourth full year of uninterrupted recovery. The *Wall Street Journal* conducted an informal survey with the following results:

> The long U. S. business boom finally is creating more job openings for some groups that have had a prolonged high level of idleness — the unskilled, the less educated, women, teen-agers, and Negroes.
>
> That's the most striking finding of a survey of the hiring plans of 66 companies, big and small, from coast to coast.
>
> . . . hiring demand is no longer confined to skilled workers, such as welders and machinists — or even to adult men with high school diplomas and experience in the industries seeking them. Companies still fight each other fiercely to hire all such men that they can find. But they can't find many, and their sales are rising fast enough to require more workers in a hurry.[8]

And Philadelphia recently reported a decline in unemployment to a 4.8 per cent level, the lowest in amost eight years. Further:

> "The whole employment trend in manufacturing had been downward," said Morris Doren, BES research director here. "We had almost

> come to the conclusion that in period after period the area would show declines in factory jobs."
>
> Doren said the area's economy has shown considerable strength in the past several months, indicating that the business recovery, now in its 43d month nationally, is having a notable impact here.
>
> Employers, Doren said, are beginning to have difficulty in finding semiskilled workers and are stepping up their recruiting efforts.[9]

As the rest of the nation reaches toward the level of prosperity found in Lancaster, it may produce some of the employment patterns found in Lancaster. For example, there is the alteration of the most desirable hiring mix and the consequent utilization of greater numbers of unskilled employees than desired. In part, this acts as an explanation of high hiring standards in Lancaster, which act as an indirect bar to Negro employment. Such standards may be enforced to improve the raw material for upgrading purposes, not as a *desideratum* but as a necessity.

It should be noted that these conclusions do not vitiate the finding that greater or different skills will be needed in the long run. In fact, there is little doubt that employers would prefer to hire employees with greater skill presently. *The key fact seems to be that employers can successfully restructure operations to accommodate greater numbers of unskilled employees if market conditions make it necessary for them do so.*

The need for increased skills in the hands of the Negro labor force is still present. However, a rise in the demand for the services of the Negro and other economically disadvantaged would permit us the socially desirable luxury of concentrating our efforts in meeting our new skill needs with the young, as opposed to a proliferation of efforts among all groups deeply affected by unemployment.

National data argue that a continued high level of prosperity is mandatory if we are to do anything about the problem of the economically disadvantaged, the unskilled, youth, older workers, and Negroes. The Lancaster experience indicates that this may be a necessary but is not a sufficient condition for large-scale employment of Negroes.

The Nature of the Supply of Labor in Lancaster

Labor force participation rates are demonstrably higher in Lancaster than in the rest of the nation for both male and female workers. We have generally accustomed ourselves to thinking of an increase in labor force participation as representing the introduction of marginal employees. In this connotation, the term "marginal" has raised the image of scraping the bottom of the barrel.

The notion advanced here is that we are witnessing individuals entering the labor market who are marginal only in the sense that they enter the labor market when job opportunities are plentiful. Further, the hypothesis is that they are not the least attractive employees, but individuals well qualified generally by educational standards to enter business and industry. Usually, their source of job knowledge is via closed circles of families and friends.[10] Their entry is facilitated by high wages and low-level entry duties. *In effect, we are saying that the Negro becomes disadvantaged in a healthy economy such as Lancaster's as though he were competing for scarce employment opportunities in a labor market marked by a high unemployment rate.*

Ideally, this hypothesis might be analyzed by identifying and isolating the marginal individuals who give Lancaster a higher labor force participation rate than the national average. Once these individuals have been identified, the task then becomes one of demonstrating that they represent superior competition as far as the Negro is concerned in the eyes of the employer. Obviously, the specific identification of these individuals is a rather difficult task. However, data can be presented which generally support the thesis.

Let us look at some of this evidence:

1. *Labor Force Partcipation Rates*[11]

Tables 6 and 7 which follow set forth labor force participation rates for the United States and for Lancaster at various times during the period 1960 to 1964.

It should be noted that in all categories—total civilian labor force, male civilian labor force and female civilian labor force—the labor force participation rate is greater in Lancaster than the national averages for the dates listed.[12]

It is interesting to note that there has been a decline nationally in nonwhite labor force participation rates. For example, Dr. Ray Marshall reports:

> The civilian labor force participation rates in 1962 were 60.0% for nonwhites and 56.1% for whites. Significantly, the nonwhite male participation rate (76.4%) was *lower* than the white male rate (78.6%), but the nonwhite female rate (45.6%) was much higher than the white female rate (36.6%). The participation rates for both nonwhite males and females were higher in 1948 (84.8% and 44.4%) than the rates for whites (84.2% and 30.6%). These rates tend to support the argument by some observers that much of the unrest in Negro communities is attributable to the deterioration in the economic opportunities of Negro males.[13]

The hypothesis was pursued further by identifying labor markets with an unemployment experience as good as that of Lancaster.

TABLE 6

LABOR FORCE PARTICIPATION RATES
UNITED STATES, 1960-1964
(IN THOUSANDS)

Category	1960	1963	January 1964	March 1964	May 1964	July 1964
A. Civilian Labor Force	70,612	72,975	71,793	72,810	74,742	76,218
B. Noninstitutional Population Aged 14 and Over	125,368	132,124	133,200	133,519	133,866	134,216
A. As Percentage of B.	56.3	55.2	53.9	54.5	55.8	56.7
C. Male Civilian Labor Force	47,025	47,867	47,041	47,411	48,577	50,347
D. Male Noninstitutional Population Aged 14 and Over	61,000	64,163	64,639	64,781	64,938	65,097
C. As Percentage of D.	77.1	74.6	72.8	73.2	74.8	77.3
E. Female Civilian Labor Force	23,587	25,109	24,752	25,399	26,165	25,871
F. Female Noninstitutional Population Aged 14 and Over	64,368	67,962	68,560	68,738	68,928	69,119
E. As Percentage of F.	36.6	37.0	36.1	37.0	38.0	37.3

Sources: *Manpower Report of the President* (Washington: Government Printing Office, March, 1964); *Employment and Earnings,* issued monthly by U. S. Department of Labor, Bureau of Labor Statistics.

TABLE 7

WORK FORCE PARTICIPATION RATES
LANCASTER, PENNSYLVANIA, 1960-1964

Category	1960*	1963	January 1964	March 1964	May 1964	July 1964
A. Civilian Work Force	116,679	123,900	122,300	122,600	124,500	128,700
B. Noninstitutional Population Aged 14 and Over	195,152	205,100	206,100	206,500	206,900	207,400
A. As Percentage of B.	59.8	60.4	59.3	59.4	60.2	62.1
C. Male Civilian Labor Force	76,550	81,300	79,950	80,300	82,000	85,200
D. Male Noninstitutional Population Aged 14 and Over	92,803	101,100	101,350	101,500	101,750	102,000
C. As Percentage of D.	82.4	80.4	78.9	79.1	80.6	83.5
E. Female Civilian Work Force	40,129	42,600	42,350	42,300	42,500	43,500
F. Female Noninstitutional Population Aged 14 and Over	102,350	104,000	104,750	104,950	105,150	105,400
E. As Percentage of F.	39.2	40.9	40.4	40.3	40.4	40.3

Sources: Data provided by Lancaster office of Pennsylvania State Employment Service; U. S. Census, 1960.
*Data for 1960 cover labor force: see footnote #11.

TABLE 8

UNEMPLOYMENT RATES IN SELECTED LABOR MARKETS 1960 AND 1963

Labor Market	1960	1963
Lancaster, Pa.	4.0	3.2
Cedar Rapids, Iowa	2.7	1.8
Des Moines, Iowa	3.0	2.4
Greensboro-High Point, N.C.	3.9	2.9
Kenosha, Wis.	3.9	3.2
Little Rock-North Little Rock, Ark.	3.9	2.9
Madison, Wis.	2.8	2.7
Newport News-Hampton, Va.	4.0	2.7
Richmond, Va.	3.0	2.3
Rochester, N. Y.	3.7	3.0
Washington, D. C.*	2.6	2.4

Source: *Manpower Report of the President* (Washington: Government Printing Office, March 1964), pp. 237-239.

*The analysis which follows excludes Washington, D. C. It is believed that the special nature of the labor market in the nation's capital warrants this exclusion.

Table 8 lists the labor markets (among the largest 150 labor markets in the United States) which had at least as good an unemployment rate as Lancaster in *both* 1960 and 1963. An attempt was made to procure current labor force participation rates, as well as data for 1960 and 1963, from four of these labor markets. The replies offered 1960 Census data and generally indicated that all later data involved considerable estimation or simply were not available. Thus, Table 9 shows labor force participation rates in these communities for 1960 only, largely based on Census data.

There are some interpretative difficulties in connection with the data. These will be made clearer by an analysis of Table 10 showing the relationship between the selected local labor market rates and national rates.

The data for Lancaster show higher labor force participation rates than the national average, as do the data for Cedar Rapids, Iowa, and Des Moines, Iowa. The data for Greensboro-High Point, North Carolina are substantially above national averages. The low civilian male participation rates for Newport News, Virginia, and Little Rock, Arkansas, are attributable to the presence of military posts. The relatively low male participation rate in Madison,

TABLE 9

SELECTED LABOR FORCE PARTICIPATION RATES, 1960*

Category	Cedar Rapids, Iowa	Des Moines, Iowa	Greensboro-High Point, N.C.	Kenosha, Wis.	Little Rock-N. Little Rock, Ark.	Madison, Wis.	Newport News-Hampton, Va.	Richmond, Va.	Rochester, N.Y.
A. Civilian Labor Force	57,051	110,725	107,344	39,729	91,911	89,376	74,231	171,802	242,327
B. Noninstitutional Population Aged 14 and Over	94,834	185,872	171,002	69,078	159,745	152,864	146,257	288,167	413,648
A. As Percentage of B.	60.1	59.6	62.7	57.4	57.5	58.7	50.8	59.6	58.5
C. Male Civilian Labor Force	37,178	70,595	65,123	28,392	56,457	56,875	49,287	106,098	155,556
D. Male Noninstitutional Population Aged 14 and Over	45,291	86,661	79,976	34,736	77,585	74,715	72,564	132,065	194,841
C. As Percentage of D.	82.2	81.5	81.4	81.3	72.8	77.1	67.9	80.3	79.8
E. Female Civilian Labor Force	19,873	40,128	42,221	11,334	35,454	32,501	24,944	65,704	86,771
F. Female Noninstitutional Population Aged 14 and Over	49,643	99,211	91,026	34,342	82,160	78,149	73,693	156,102	218,807
E. As Percentage of F.	40.1	41.5	46.3	33.0	43.1	41.5	33.7	42.1	39.7

Source: U. S. Census, 1960.

*Data are based on Standard Metropolitan Statistical Areas.

TABLE 10

LOCAL LABOR FORCE PARTICIPATION RATES AS PERCENTAGES OF NATIONAL RATES, 1960

Category	Lancaster, Pa.	Cedar Rapids, Iowa	Des Moines, Iowa	Greensboro-High Point, N.C.	Kenosha, Wis.	Little Rock-N. Little Rock, Ark.	Madison, Wis.	Newport News-Hampton, Va.	Richmond, Va.	Rochester, N.Y.
Total Civilian Labor Force	106.2	106.7	105.9	111.4	102.0	102.1	104.3	90.2	106.0	104.0
Male Civilian Labor Force	106.9	105.8	105.7	105.6	105.4	94.4	100.0	88.1	104.2	103.5
Female Civilian Labor Force	107.1	109.3	113.4	126.5	90.2	117.7	113.4	92.3	115.0	108.5

Source: Previous tables.

Wisconsin, is probably attributable to the influence of the University of Wisconsin and the large number of male students there. (Perhaps the high female labor force participation rate in Madison can be attributed to wives helping to put their husbands through college.) In the case of Kenosha, Wisconsin, there is no apparent reason for the low female labor force participation rate.

In general, though, the data lend support to the notion that low-unemployment communities tend to have higher-than-average labor force participation rates. They are far from conclusive, however, and offer us only a guide in understanding the plight of the Negro in a busy economy. Certainly, his situation, as well as a community's labor force participation rate, is affected by his share of the population. In the case of Madison, Wisconsin, the Negro population is barely over 1 per cent of the population. In the case of Richmond, Virginia, the figure is more like 40 per cent.

We conclude that the data have their principal relevance in the Lancaster setting. Here there seems to be definite evidence that a high level of prosperity in the community has induced a higher-than-average labor force participation rate.

It is appropriate at this juncture to examine the Lancaster data in greater detail.

2. *Lancaster Census Tract Data*

There are two census tracts among the fifteen in Lancaster which have a large concentration of Negroes. In neither tract do Negroes represent a majority of the population; nevertheless, the Negro population is sufficiently large to have a substantial effect on these census tracts. Population data for the two tracts in question are:

TABLE 11

LANCASTER POPULATION IN 1960 U. S. CENSUS

	Tract 9	Tract 14
White Population	3,625	3,230
Negro Population	1,566	845

If the hypothesis is correct that the Negro in an economically healthy community such as Lancaster suffers from increased labor force participation by individuals with educational (and presumably skill) levels superior to those of the Negro labor force, then census data by tracts should reflect some of this difference.

It may be seen from Table 12 below that virtually all other tracts have higher educational attainment rates than those tracts in which Negroes dwell. In a sense, this finding is predictable in that it is known that the population as a whole has a higher median educational attainment than the Negro population. Thus, the finding that tracts with above-average labor force participation rates have higher educational attainment than the Negro population may be expected. Nevertheless, the demonstration of higher labor force participation rates among those with greater educational attainment than the Negro is evidence in favor of the competitive hypothesis. No claim is made of a correlation between labor force participation rate and schooling. In fact, the existence of census tracts with high labor force participation rates may be products of many factors. However, whatever the source, their very existence introduces a note of strong competition for the Negro in that the individuals from these tracts possess superior educational qualifications than Negroes and thus are presumably more attractive to employers.

Conclusion

In our analysis of the Negro in Lancaster, a number of nonstandard reasons for high Negro unemployment have been explored.

The limited geographical area in which the Lancaster Negro seeks employment was noted. Data from the 1960 Census offer evidence that the Negro is thus limiting himself to competing in the less active portion of a busy labor market.

The first major conclusion is related to the presence of a large number of unskilled positions in Lancaster. National and Philadelphia data present the view that employers are increasingly turning to the use of unskilled personnel as prosperity continues and manufacturing activity expands. In many cases this undoubtedly results in a restructuring of productive activity, considered less than optimum by the employer. The hypothesis advanced is that the employer in such a situation seeks to minimize the dislocation by hiring employees with as high a level of general education as possible and then training them on the job for the skills needed by the company. While the hiring of the unskilled undoubtedly serves to improve the Negro's opportunities absolutely, he may still lose relative ground because of his weaker general education.

Second, the thesis has been explored that a busy economy tends to call forth a higher-than-average labor force participation rate and that the nature of the marginal worker is such that he represents difficult employment competition for the Negro. The

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TABLE 12

LABOR FORCE PARTICIPATION RATES AND SCHOOLING BY CENSUS TRACTS IN LANCASTER CITY, 1960

Location	Labor Force Participation Rate		Median Years of Schooling
	Male	Female	
Lancaster City	77.7	43.8	9.6
Tract 9	77.8	48.6	8.3
14	79.4	41.4	8.8
Other Tracts with Above Average Labor Force Participation Rates:			
Tract 1	79.2	51.6	9.1
2	83.4	40.3	10.8
3	77.9	46.7	9.8
8	84.1	43.1	10.9
10	79.7	43.8	8.8
11	80.9	41.4	10.0
12	90.9	38.3	12.0
13	81.6	40.3	8.8
15	84.2	31.5	9.6
Other Tracts with Below Average Labor Force Participation Rates:			
Tract 4	77.3	45.1	9.0
5	42.5[1]	33.3	13.0
6	71.5	47.0	11.5
7	75.3	44.4	9.2

Source: U. S. Bureau of the Census, *U. S. Censuses of Population and Housing: 1960, Census Tracts, Lancaster, Pa.* (Washington: Government Printing Office, 1962).

[1] Tract in which Franklin and Marshall College is located.

data with regard to Lancaster consistently show a pattern of higher-than-average labor force participation over the past four years. Data for other labor markets with low unemployment rates tend to support this thesis but are far from conclusive. An analysis of census-tract data in Lancaster shows higher educational attainment in those tracts with higher labor force participation rates.

Thus, the Negro's position in a generally prosperous community such as Lancaster can be seen to be independent, in good measure, of both prosperity and low unemployment. The same prosperity which may be presumed to aid his search for employment may well call forth a countervailing competitive force which serves actually to decrease his employment opportunities and raise his unemployment rate. This marginal work force may, in practice, be precisely large enough to provide the difference between a "tolerable" level of unemployment for the Negro and a rate which is unconscionably high.

In effect, an increase in the demand for labor does many things in addition to opening jobs. It may require employer restructuring of the work force. It may step up internal company training. Further, it may call forth into the labor force individuals whose background results in significant alteration of the composition of the labor force. Finally, an increase in the demand for labor generally may have a quite disproportionate effect on minority labor. The demand curve may shift to the right insofar as the community is concerned, while it remains stationary for the Negro. The point at which an increase in employment carries with it a proportional or favorably disproportional effect on Negro employment is a matter of conjecture.

FOOTNOTES

1. *Manpower Report of the President* (Washington: Government Printing Office, March, 1964), pp. 24-33.
2. American Bankers Association, *Proceedings of a Symposium on Employment,* Washington, D. C., February 24, 1964, p. 26.
3. Letter from Hugh M. Raper, Director, to Walter J. Gershenfeld, October 23, 1964.
4. U. S. Department of Labor, Bureau of Employment Security, *Handbook on Estimating Area Employment of Self-Employed, Unpaid Family, and Private Household Workers—Nonagricultural Total* (Washington: Government Printing Office, August, 1963), p. 1.
5. E. Clague, "The Anatomy of Unemployment," address before the Conference of Business Economists, New York, New York, May 8, 1964 (Washington: Government Printing Office, processed), p. 6.
6. U. S. Department of Labor, Bureau of Labor Statistics, and U. S. Department of Commerce, Bureau of Census, *Concepts and Methods Used in Household Statistics on Employment and Unemployment from the Current Population Survey* (Washington: Government Printing Office, June, 1964), p. 2.
7. *Manpower Report of the President, op. cit.*
8. "Job Outlook," *Wall Street Journal,* October 2, 1964, p. 1.
9. D. Bedell, "Jobless Total at 8-Year Low in Philadelphia Area," *Evening Bulletin* (Philadelphia), October 22, 1964, pp. 1, 15.
10. See Ray Marshall, in "The Job Problems of Negroes," above, p. 8: "Since Negroes usually live in segregated neighborhoods, they rarely learn about jobs with few or no Negroes in them, and they apply for the kind of jobs they know they can get. Since aspirations are conditioned by one's associates, few Negroes are motivated to apply for jobs from which they have been excluded."
11. Definitionally, labor force is based on place of residence while work force is based on place of work. In using national data, this distinction raises no significant problems. In the use of local labor market data, however, the question of resident and non-resident labor force can become significant. In the tables which follow, national data and local labor market data derived from the 1960 Census are in terms of *labor* force figures. Lancaster data for all except the 1960 Census data are in terms of *work* force figures. This is the manner in which Lancaster and other local labor-market data are customarily reported. In this case, the Lancaster office of the Pennsylvania State Employment Service estimates a net work force loss by outmigration to work of approximately 1,000 individuals. This results in a conservative statement of Lancaster labor force participation rates. It is not considered significant, however, inasmuch as 1,000 individuals amount to only three-fourths of 1 per cent of the Lancaster labor force.
12. The possibility that the higher labor force participation rate in Lancaster is a function of the age distribution was explored. This was ac-

complished by applying 1960 national labor force participation rates by age grouping to the actual age grouping found in Lancaster according to the 1960 Census. For both male and female categories, this age standardization yielded a lower labor force participation rate than was shown by the actual data. Thus, the higher labor force participation rate in Lancaster cannot be considered a product of the age distribution.

13. Marshall, *op. cit.*

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A COMMUNITY PROJECT WITH AN OPEN DOOR EMPLOYMENT POLICY: THE BUSINESS AND INDUSTRIAL COORDINATING COMMITTEE OF NEWARK, NEW JERSEY

Charles W. Garrison*

HISTORICAL

Newark is the 30th largest city in the country and largest in the state of New Jersey. Its population, 406,000 in 1960, is approximately 50 per cent nonwhite. Newark is an old city, which will celebrate its 300th anniversary in 1966. It is also a county seat and center of the nation's 13th largest metropolitan area. The economic and social problems of Newark are common to any community where racial discrimination has been practiced intentionally or otherwise. Community action in this highly urbanized metropolis became necessary to put into force "equal opportunities" for all regardless of race, color, creed, or national origin.

Under crisis conditions and almost by accident, the Business & Industrial Coordinating Committee (BICC) was formed in Newark in August, 1963 to partially address this problem. The BICC came into being on purely private initiative. It was nurtured along by Hugh J. Addonizio, Mayor of Newark, when civil rights demonstrations broke out on the construction site of the city's new five million dollar Barringer High School. This was the "hot" summer of 1963. The mood and temperament of the Negro community was sizzling. The unemployment rate among nonwhites was double that for whites.

Eight civil rights groups working together as the Newark Coordinating Council demonstrated against alleged discrimination by construction trade unions at Barringer. A meeting was later held to involve downtown department stores to join the jobs dispute. The stores took no part in the Barringer controversy but agreed to develop more jobs for minority groups by greater integration within the total Newark-area labor market.

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The department stores realized that the scope of the problem extended beyond the stores and into the fields of business, industry, labor, government, and social agencies.

While there had been no violence up to this point, there was a belief that the Negro community could erupt at any time. It became apparent that to maintain racial peace, the business community must examine its employment practices and proceed along the road of an open door policy of hiring nonwhites and that failure to do this would probably bring economic and social chaos to the city.

FORMATION OF THE COMMITTEE

The decision by the department stores to help organize this effort brought into being one of the most unusual non-official organizations dealing with civil rights problems.

The BICC is an unparalleled coalition of representatives from business, civil rights groups, government agencies, unions, and social welfare agencies who are trying to provide greater opportunities for employment, training, and upgrading of Negroes and Puerto Ricans in the Greater Newark area. It is an unofficial nonbinding association held together by a set of by-laws. Its underlying strength is derived from the willingness of participants to administer a program aimed at the unemployment problems of minorities.

It has been a major vehicle that has helped dispel the anxiety existing in Newark during the past two summers when civil rights activities threatened to explode. Progress has not been as rapid as some civil rights groups would like, but there is a realization that many companies are now making a sincere effort to open their doors for the first time to the employment and upgrading of Negroes and Puerto Ricans.

The committee, when first formed, met weekly. Because of the mutual understanding and the respect achieved by this group, meetings are now held on a monthly basis with subcommittees working constantly toward the several objectives.

Composition of Membership

Company participation on the committee has grown from a handful to over 150 with representatives from large and small employers in the fields of merchandising and retailing, banking, real estate, insurance, public utility, industry, and manufacturing.

Civil rights groups now total over twenty, and they include the Urban League, NAACP, and the Newark Coordinating Council.

Unions are represented by Negro unions, the Independent Unions of New Jersey, and the AFL-CIO. Little success has been achieved in getting representation from construction and building trade unions.

Government agencies are represented through the offices of the Mayor of Newark, the Newark Human Rights Commission, New Jersey State Employment Service, and various levels of the county, state, and federal government.

Churches are represented by clergymen from a number of Negro churches and white clergy from each of the three major faiths.

Social agency representation is largely the result of a central organization known as The Welfare Federation of Newark. Its main functioning body is the 132-member Council of Social Agencies of Newark, Irvington, Belleville, and West Hudson.

The Welfare Federation has been a prime mover in the formation of the continued operation of the BICC. Its Board of Trustees approved activity-coordination of the BICC as one of the responsibilities of its community relations director through a part-time coordinator. They have permitted the use of its headquarters building as a meeting place for the BICC and have assumed operating expenses. In addition, they conduct the annual United Appeals campaign.

Federal, state, and city agencies are cooperating to keep the committee aware of their services and how they can be of help to the BICC in the field of employment, education, and training.

Overall, about 300 representatives belong to the BICC.

Objectives

The highest priority is on expanding effort in the job placement area. This is essential, and it indicates to the civil rights groups and the Negro and Puerto Rican communities that BICC member companies are sincere in their open door policy of non-discrimination. It is also essential to the economic and social well-being of minority citizens who, in some instances, have been denied employment rights on an equal basis with others. Overall objectives are

1. To take positive action in a forum where open communications will be available at all times between business, in-

dustry, labor and civil rights organizations to openly discuss problems of mutual interest.

2. To place unemployed Negroes and Puerto Ricans in jobs based on their skills and ability.
3. To upgrade the placement of Negroes and Puerto Ricans working at jobs below their skill level.
4. To determine which areas of competence are lacking in job applicants and develop ways and means with community resources to develop programs which will give training in such areas.

How Does A Company Participate?

The BICC is continually approaching new companies for membership in its organization. This is done by letter or telephone at the executive level or through personal contact by members of the Jobs Available Committee.

Companies that join assign a representative to attend a monthly meeting or serve on a subcommittee. Company membership entails submitting to the BICC Jobs Available Committee a list of their job openings. This affords the BICC first "crack" at trying to fill a wide variety of jobs by its "job placement agency." This does not prevent a member company from filling the vacancies through other channels. Careful screening is done by the Urban League of Essex County (which serves as the BICC job placement agency), before referrals are made. Member companies of the BICC are not required to furnish statistics on their employment hiring practices. Subcommittee reports made at monthly meetings are summary reports and do not disclose the identity of individual companies. Companies are informed that the BICC has no authority to mediate disputes over employment. Under its by-laws the committee does not prevent civil rights demonstrations if conciliation is unsuccessful. There is no fixed membership fee. It has been only recently that the BICC solicited its business and industrial membership for a small contribution to defray expenses. In the main, major expenditures have been assumed by individual companies.

Why Would A Company Want to Join the BICC?

Businessmen in the city of Newark must be made aware of minority group problems. The economic, social, and moral issues affecting Negroes and Puerto Ricans are the concern of the entire community. The BICC affords an opportunity for all parties to gather around the conference table to discuss problems of mutual interest. Below are listed some of the reasons the BICC feels that a company should join its organization:

1. To take a more active part in employment problems that affect the entire community.
2. To take part in a conciliatory approach to working out grievances that might occur between employers and civil rights groups.
3. To demonstrate to the Negro and Puerto Rican community that business and industry are taking affirmative action in providing equal employment opportunities.
4. To obtain a greater number of qualified nonwhite workers.
5. To become better informed about methods of employing and upgrading qualified Negroes and Puerto Ricans.

Accomplishments

The BICC is happy to note its progress but is fully aware that its achievements fall somewhat short of solving the many problems of the minority groups in the city of Newark.

— It has provided the Greater Newark area with an organization that is an action-oriented vehicle composed of diverse groups concerned with unemployment and which is responsible for an attitudinal change on the part of the employers in the area.

— It has influenced many companies to take an unbiased inventory of their personnel for the first time. It has influenced area employers to look introspectively at policies of hiring, upgrading, and training as they pertain to ethnic makeup of employees. Affirmative action in recruiting minority group workers has been stepped up by the job placement agency of the BICC.

— In its first eleven months of existence, BICC member companies hired roughly 4,000 Negroes and Puerto Ricans — approximately 30 per cent of 13,000 new members employed. BICC cannot take direct credit for these totals but rightly assumes its influence was a major contributing factor in the high rise of nonwhite hiring.

— The BICC has co-sponsored with the Newark Board of Education a Work/Study program for 25 potential dropouts. The students spend a half-day in school and a half-day on the jobs furnished by member companies of the BICC.

— In its 16-months history, approximately half of the Urban League's total job placements were directly attributed to the BICC. The added load on the Urban League staff has prompted BICC member companies to provide competent personnel people to assist in an evening program of interviewing and screening hundreds of job applicants.

— The BICC has developed a proposal for on-the-job training and retraining and is now awaiting approval of its application under the federal Manpower Development and Training Act. The proposal is currently being reviewed by the Office of Manpower, Automation and Training (OMAT) of the United States Department of Labor. It has been hailed as a positive approach to the challenge of automation.

— An all-day conference for member and non-member companies on closing the gap between EMPLOYMENT AND THE MINORITY GROUP WORKER was sponsored by the BICC on October 15, 1964. Speakers included John H. Johnson, president of Johnson Publishing Company, Chicago, Illinois; Alan Zuckerman, U.S. Department of Labor, O.M.A.T., Washington, D.C.; and Raymond F. Male, New Jersey's Commissioner of Labor and Industry, Trenton. Prudential Insurance Company hosted the conference and provided facilities for workshops that were concerned with finding and placing qualified minority group employees and problems of testing nonwhites.

— The BICC has sponsored discussion meetings for private and government agencies who are involved in any kind of employment programs. The purpose was to acquaint organizations with overall employment efforts and to make some attempt to coordinate where duplications existed.

— The BICC has sponsored, with the Greater Newark Chamber of Commerce, a forum for companies within the business field to better understand the provisions for training under state and federal laws.

— Cooperative study sessions with schools, the Board of Education, personnel people, labor, professional management counsel, and many others have been conducted.

— The BICC's People Available Committee, in conjunction with the Urban League, is completing an in-depth study of 1,206 job applicants who were interviewed and screened during a two-month period. Applicants were grouped by age, sex, education, vocational skills, place of residence, marital status, number of job referrals, employed or not, and reasons for not being hired. The statistical data have been taken off the computer and collated. The study is slated for distribution before January 1, 1965.

— The Urban League of Essex County honored the BICC with its outstanding community service award at its Eighth Equal Opportunity Day Dinner, on November 19, 1964.

Activities in Progress

— We are attempting to expand BICC representation in the

Greater Newark area on the part of business, industry, and civil rights groups.

— The testing committee of the BICC is presently conducting a survey of testing techniques of several hundred area employers. An attempt is being made to produce information that might suggest more realistic criteria for the hiring of entry-level clerical workers that are selected by test means. Company identity is never disclosed but test operations, procedures, and most frequently used tests in the Newark labor market are what the testing committee seeks to learn about.

—The BICC is setting up an adjunct group to the training committee that will be conversant with funding for training, vocational-education, and retraining under the various assistance programs.

— BICC is attempting to establish a "crash" program for 50 high school graduates, who were BICC job seekers, referred to jobs, but who failed employer entry-level tests. These 50 have agreed to short-term training. They represent an exhaustive follow-up of 357 high school graduates who came seeking jobs, were referred, and failed employer hiring tests over a four-month period.

— Our public relations committee is working on the production of a public information program directed to every segment of our population utilizing all communication channels. This includes the production and distribution of literature and setting up a speakers bureau to reach every June high school graduate and assure him that equal employment opportunities exist in Greater Newark.

— We are working cooperatively with local programs and projects geared toward promotion of equal and full employment opportunities. Coordination of all programs for maximum effectiveness will be a major goal.

Officers

The officers of the BICC are two co-chairmen (who are elected), a secretary, and a treasurer. Their term of office is one year. The co-chairmen, one of whom represents business and industry, the other the civil rights groups, appoint the secretary and the treasurer and two co-chairmen of each operating committee; one chairman representing business and industry, the other representing the civil rights groups.

Executive Committee

This committee is made up of all officers and co-chairmen of the operating committees. It meets one week prior to the regular monthly meeting to discuss and review all committee reports and decide on matters to be placed on the agenda for the regular monthly meeting.

Coordinator

This position was created by the Welfare Federation with a view to its becoming a full-time salaried position if funds became available. The coordinator handles the day-to-day operations of the BICC and coordinates the assignment of committee functions. Presently, the Welfare Federation's general office pool and the secretary of the federation's director of community relations are handling the clerical functions.

Operating Committees

Finance — raises necessary operating funds and is in charge of finances.

Jobs Available — solicits and recruits membership in the BICC from business and industry within the Greater Newark area and actively works with business and industry to develop job openings for qualified Negro and Puerto Rican workers, and establishes procedural steps for job listings.

People Available — works with all civil rights groups to seek, attract, and refer qualified people for employment. It operates to insure that job-seekers are properly referred for testing, counseling, and training.

The Urban League of Essex County is the functional agency for this committee. They interview, screen, and refer qualified applicants to companies from which listings of job openings have been secured.

The Urban League uses the services of the New Jersey State Employment Office and keeps abreast of training programs under federal and state agencies.

Procedures — proposes and recommends to proper sources, solutions for problems coming before the BICC, and develops methods by which the BICC can be more effective.

Training — determines which areas of competence are lacking in job applicants and seeks to develop ways and means with community resources to develop programs which will give training in such areas.

The committee is divided into subcommittees, *Short range goals* and *Long range programs,* and is now in the process of setting up another subcommittee primarily concerned with getting financing for the training programs.

For short range planning, the committee has submitted a crash training program to equip applicants to pass pre-employment tests for beginning-level jobs. Funds for this have been requested under the Manpower Development and Training Act.

For long range planning, the committee is meeting with the Newark Board of Education to set up summer job training in business and industry for school guidance counselors and department heads with the ultimate goal of curriculum change better suited for business and industrial needs.

The current recommendations of the training committee are

1. An occupational program to be integrated within the comprehensive high school rather than the establishment of a separate facility.
2. An expansion of the dropout counselor program from four to eight schools.
3. An expansion of work study programs throughout senior high schools of Newark.
4. An expansion of the Central High School evening program to include pre-high-school and elementary subjects.
5. An adult school program (non-hobby) to offer upgrading skills and curricula more consistent with the world of work.

Public Relations — stimulates, publicizes, and promotes total program of the BICC. This committee is currently working on the formation of a speakers bureau and

— distributes leaflets to high school seniors,

— provides speakers for participation in high school career day programs in schools with a high enrollment of nonwhite students, and

— arranges for spot announcements for radio and comprehensive newspaper coverage in leading local and New York publications.

Upgrading — works with civil rights groups and business and industry to develop programs which will give training in such areas.

This committee is currently awaiting approval and funds under the Manpower Development and Training Act for a proposal it developed to retrain people now in positions that will be affected by automation and other job dislocation and obsolescent causes.

CONCLUDING REMARKS

In conclusion, it must be stated that continued efforts within the business and industrial field to gain more member companies must be made in order for the BICC to continue on a successful course.

The Negro and Puerto Rican communities are not fully aware of what the BICC is doing despite the distribution of 2,000 posters announcing that new job opportunities exist in Newark.

Communication within the community at grass root levels among more civil rights groups, clergymen, Negro churches, and the Spanish-speaking community must be greatly expanded.

PART VI

Dropouts, Training, and Other Urban Industrial Problems

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EMPLOYING NEGROES IN URBAN LABOR MARKETS

Walter H. Powell*

The integration of the Negro into industry has moved beyond the stage of theoretical discussion by management executives and has become a real operating problem for many firms. To many, it is a new meeting of an old challenge. The members of the business community have a very real and vital part in this challenge — it is they who provide equal opportunity employment, and, specifically, the hiring of Negroes is the central issue.

With the existing pressures, the implication is that industry does not wish to integrate and that it is painstakingly avoiding its responibility. The moral responsibility has now become a legal requirement. Considerable controversy has surrounded the enactment of the recent civil rights legislation. Industry, in part, has reacted unfavorably toward this legislation. This is another manifestation of the struggle between self-interest and public policy in a free enterprise society.

While "Equal Opportunity Employment" is now enacted into law, rigid enforcement will probably not be tried for many years. It has been through voluntary action, government persuasion, and, when necessary, subtle government coercion that many business firms have become party to equal opportunity employment because of their defense contracts.

Many companies, by clear-cut, definitive declarations of policy have encouraged the employment of Negroes. The personnel officer has been given a mandate to embark upon a policy of equal employment and merit employment within the company. But even these mandates do not solve the problem, for the recruitment of eligible Negroes is extraordinarily difficult.

It is a paradox that in an urban community with a relatively high rate of unemployment and with a large Negro population that the hiring of Negroes, even for semi-skilled jobs, should be such a difficult task.

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THE LARGE URBAN LABOR MARKET

The entire Philadelphia community presents a real challenge in solving some of the present and future problems of Negro employment. It is a community with a changing labor force, high unemployment, and an increasing Negro population. The same problems which present themselves in Philadelphia undoubtedly will or already have presented themselves in other large urban labor markets, such as Chicago, Detroit, and Pittsburgh. These problems relate to recruiting, screening, and orienting successful applicants to the job situation. Each of these procedures is a normal step in bringing jobs and people together. The large urban community is a crude market place. Too often, the labor market is thought of as a place where the forces of supply and demand are so knowledgeable that the proper bargain will bring about the optimum hiring situation. This is far from the truth.

State Employment Agencies

One attempt to bring about a more efficiently functioning market place for potential employee and the potential employer is the establishment through the nation of a system of state employment agencies, operating under federal control. These agencies function in the administration of unemployment insurance and in the placing of people in open jobs. In the smaller communities, this works exceedingly well — the state employment office is usually the prime source for all employment. In the larger communities, more often than not, it serves only at the lower skill levels. Also, in the larger communities this government employment agency is often ignored by management. Only 15 per cent of all employment was done through this channel.

Imperfections in the Labor Market

In terms of employer efforts to recruit Negroes at any level of the skill ladder, employers generally know nothing about the Negro community and the Negro labor market. On the other side of the coin, the Negro community (whatever nebulous group that might be) neither knows about the availability of jobs nor how to advise its unemployed on the methods of a job search. There is presently no contact point nor effective channel through which to reach Negro applicants. When an employer continually states that a Negro has never applied to his company, it is not a prima facie case of discrimination. There are many companies which would welcome Negro applicants, but they do not know how to attract Negro candidates for employment. This is especially true of the smaller employer.

Even though the environment to encourage Negro employment has been growing ever since World War II, companies trying to comply with the fair employment acts of city, state, and federal government cannot yet find adequate numbers of eligible Negroes for their job openings. Companies with collective bargaining agreements that are obligated by contract to post all vacancies and promotional opportunities on bulletin boards are bewildered in that their own Negro employees do not take advantage of the opportunities for promotion or upgrading. Further, Negro employees, as a rule, do not recommend their friends or relatives for the job vacancies that are posted within their own companies.

In the case of our own company, we have a practice of posting nearly all salaried as well as the hourly jobs. The rationale is obvious. The referral of friends by our employees makes an excellent potential labor supply. In spite of this practice, for the past ten years and with a high Negro population within the company, the number of referrals has been so negligible as to be not even worth discussing.

As a company, we have continually advertised in the local newspapers with "open" advertisements, and even the inclusion of the statement that we are an "Equal Opportunity Employer" has not significantly increased gate applications. And this is in a community where we, as a company, have been identified with fair employment practices, where we are active members of the Urban League, and have maintained strong relationships with many interracial groups. How then does one penetrate the urban labor market? The urban labor market is imperfect. The communications are poor. Prejudices and fears are hampering the meeting of the forces of supply and demand. It is a job market in which the Negro has made very substantial numerical gains in employment but poor progress in merit employment. There are other factors that must be studied to determine whether or not the changes in the pattern of employment have been sufficient to warrant an optimistic attitude toward the Negroes' industrial future. In the 1940's, the outlook was none too rosy because discrimination was quite prevalent. During the 1950's, even though there was an erosion of prejudice, it would be naive to say it had disappeared. However, in the 1950's and

1960's, with the pressures of federal and state legislation, opportunities for Negro advancement in industry began to open up.

Merit employment was the driving theme of progressive and militant Negro organizations. This was a deviation from merely hiring Negroes for traditional jobs. As the 1940's matured into the 1950's and 1960's, stability and length of employment provided the Negro with sufficient seniority to withstand the variations in the business cycles. However, there has not been a tremendous amount of upgrading in industry among this group with comparatively low seniority. A comparison of this group with a similar grouping of white semi-skilled workers, employed about the same time, will not show that one group has advanced at the expense of the other.

The opportunities were for unskilled and semi-skilled jobs and not for skilled and managerial positions, and the persons filling those jobs did not have the attributes to be promoted.

In the latter part of the forties and though the fifties until today, the well-educated Negro trained in business skills has primarily sought employment in civil service. The protective nature of government employment against prejudice, and against the unknown, has provided a haven for competent Negroes. Thus, a heavy segment of the Negro population which is capable of being upgraded in industry is not within the ranks of industry. There are several explanations of this phenomenon. First, the jobs available during the war years were mainly unskilled and semi-skilled jobs. Second, the normal channels for securing white collar jobs have been closed to the Negro until recently. Third, the Negro has hesitated – and been reluctant – to take on responsibility in lower managerial jobs such as factory supervision. The reasons are sociological, economic, and psychological, and, while disturbing, they are not surprising. The Negro employee has not availed himself of the opportunities of apprentice training and upgrading guaranteed to him under most collective bargaining agreements.

Unfortunately, the heavy trend to civil service and government work for white collar jobs has meant under-employment for many capable people. Upgrading is possible, but the competition is probably more intense within the limited environmental factors of government than within the whole of industry. Efforts to dislodge this group from these cloistered jobs into the mainstream of industry have failed continually.

A NEED FOR LOCAL SOLUTIONS

The uncertainties of the labor market have to be solved locally.

The attempt by the National Urban League to establish a skills bank cannot succeed on a national basis. It must be carried out in every community. There are no Negro organizational agencies presently constituted to perform an employment agency function. Most Negro job candidates have not learned to use private employment agencies – either white or colored. The Urban League, the American Friends Service Committee, the NAACP are not capable of performing the functions of an employment agency. In Pennsylvania, as in some other states, special state employment offices have been created to service professional and technical job applicants and higher white collar jobs. Industry has not really been satisfied with these offices, and as a result these public agencies have not been a satisfactory source of supply for white collar jobs. The employment service has not been able to attract either the number of trained people or the skills required. A demand has existed for technical skills for the past few years that has increased the number of private employment agencies to satisfy these needs.

Thus, to provide the opportunity for equality in the job market and to provide the fullest potential in the way of job opportunities to all, a radical change will have to be made in the functioning of the labor market.

THE SEARCH FOR QUALIFIED EMPLOYEES

Within the past two months, our company went into the labor market twice to find male, semi-skilled employees. More specifically, the job specifications called for men who could read, write, and perform with training, jobs of janitor, warehouseman, material handler, and molder. Twenty work days are more than enough to train the average candidate for any of these positions.

The advertisements were placed in the two Philadelphia Sunday papers. We stated the name of the company, its address, and the fact that it is an "Equal Opportunity Employer." We stated that once an employee completes his initial qualification period, he is eligible to bid for any open job posted on the bulletin board. Thus, within the framework of the union-management agreement, we attempt to encourage free movement upward for all individuals. (Parenthetically, it is not surprising that we restrict lateral moves and downgrades and encourage promotions.)

As an initial condition for hiring employees, we think in terms of upgrading. It is not enough to hire a man as a sweeper in the lowest wage grade, because sooner or later he will want advancement, and it is to our advantage for him to be promoted. As part of our pre-employment procedure, we have established certain hiring agreements that are basic to all jobs.

The response to our advertising was exceptionally good. Over one hundred men appeared, but only seventy-six were processed. The others left without completing the application for employment. Almost 85 per cent of the applicants were colored. Out of the seventy-six men, we were only able to hire four immediately, and six are possible future call-ins.

Our recruiting and screening practice included giving a verbal or non-verbal intelligence test, seeking a minimum standard comparable to an eighth-grade education. We also gave four simple arithmetic questions calling for simple addition and subtraction skills. Two right was considered qualifying. A fourth- or fifth-grade student should be able to do all four correctly.

Eighteen of the seventy-five failed the test. Fifteen failed to complete all parts of the test. Twenty-seven could not get past the interviewer, either because of poor work history or attitude.

This pattern is not unusual; it has been repeated several times within our limited sphere of activity. Other companies in the Philadelphia community have had similar experiences that have taxed their facilities and their good intentions.

CONCLUDING REMARKS

Too often the concern has been with the demand side of the equation. The problem has become an increasingly serious evaluation of the supply side. Victories by militant groups to bring about equal opportunities melt into a handful of new jobs, because there are not enough competent applicants.

Harassment of industry is not going to solve the problems of merit employment. Insistent inspectors from over-zealous government agencies will foist impossible standards upon industry. In fact, too much token racial employment is already in existence. This token employment is obscuring the more serious problems which lie ahead.

These problems are basic to our society — they deal with dropouts, the inadequacies of our educational system, and the poorer-trained Negro who is seeking employment. Industry is faced on the one hand with the pressure to remain competitive through constant innovation, automation, and improvement of efficiencies of operation. On the other hand, the people available to help do this job are not in adequate numbers within our society. Prejudices and racial discrimination are contributing to this problem, and industry cannot continue to endure this pressure indefinitely.

It is a simple economic truism that increasing jobs, purchasing power, and opportunity for a significant portion of our population will in fact increase profits. Full employment is a common goal for every diverse segment of our economy.

Management has a responsibility in meeting the problems of merit employment — not mere technical compliance with the law, but an active participation in the affairs of the local community.

The future labor supply cannot be drawn from an inadequately educated population. By default the solution of these problems has been left to social workers, social agencies, and educators, well meaning in technique, and in their conscientious efforts, but absolutely ignorant of the industrial world around them. Industry must not only provide the environmental atmosphere within its plants but must take an active part in the community shaping the future of tomorrow's labor force.

Many of the frontiers of merit employment and integration have been established in the industrial world. Now the total environment for future citizens of all races and creeds must be firmly established and communicated to the innermost parts of the community so that it will offer the incentives for continuing education. Management knows that it cannot manage by default. Now it must learn that it must lead by example and with affirmative action in the world in which it lives.

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TWO ISSUES OF NEGRO ADVANCEMENT

Arthur B. Shostak*

Especially striking in the matter of Negro advancement are two unsettling problems we sometimes sense, but seldom discuss in public.[1] For one, there is good reason to recognize that the cause of Negro advancement is intimately related with that of urban reform, and neither can progress without the other. Second is the fact that for many businesses integration means the end of some, but also the beginning of other, race-related problems.

NEGRO ADVANCE AND URBAN REFORM

For over one hundred years the nation has witnessed a steady and large-scale migration of Negroes from backwoods and rural areas to the nation's cities (where 72 per cent of all Negroes can now be found), and the outmigration of whites from relatively integrated cities to largely segregated suburbs.[2] In all states, but especially Northern states, the nation's Negro population now concentrates in key industrial cities (e.g., the Twin Cities have 85 per cent of Minnesota's Negro population; Milwaukee, 83 per cent of Wisconsin's Negroes; Chicago, 81 per cent of Illinois' Negroes; New York City, 76 per cent of the Negroes in New York State; Philadelphia, 62 per cent of Pennsylvania's Negro population; and St. Louis, 56 per cent of the Negroes in Missouri).[3] Of equal significance is the white "exodus" to suburbia: Between 1950 and 1960 the twelve largest United States cities lost over 2,000,000 whites at the same time that they gained nearly 2,000,000 Negroes.[4]

The current civil rights drive and the campaign for equal opportunity operate in an environment more tenuous than is generally realized. *The future of the Negro is inextricably related to the future of the city, and the future of the city is uncertain.*

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American industry has a vested business interest in Negro advance *and* urban reform. For example, research and development can little afford the waste of talent inherent in an underdeveloped population of millions. Low purchasing power of underdeveloped groups has serious costs as does the continued strain of locating and competing for the services of the very few vocationally-prepared Negroes. Overall, companies can little afford the rundown and sometimes hazardous nature of the metropolis, especially as competition for scarce high-talent manpower, for example, often turns in part on the company's location. Executives-on-the-move are known to weigh heavily such non-work considerations as available schooling, climate of law and order, and general progressiveness of the community they are being asked to join.

It remains to be seen if cities can stay and alter certain ominous trends. Can the cities rehabilitate slum areas and integrate former slum dwellers? Can the cities meet the needs of their bi-modal Negro minority (very young and very old people), at the same time that the outflow of young and middlle-aged whites is slowed? Can industry be attracted back into the cities, or, alternatively, can city dwellers be helped with improved mass transportation to reach outlying industry?[5]

ROLE OF BUSINESS

What can be done? What is the role for American business in this two-part challenge of Negro advancement and urban reform?[6]

For one thing, the business community can bring its genius for fiscal matters to bear on questions of urban reform. Many city school systems, for example, rely on part-time sessions, over-crowding, substitute teachers, unlicensed instruction, non-resident staff members, and underpaid personnel because the system is starved for funds. How is the city to raise new revenue for welfare, schooling, and housing needs? What are the merits and shortcomings of such possible moves as increases in property or sales or income taxes, additional borrowing, or participation in a federal "share-the-tax" revenue plan? Businessmen who voluntarily engage in this particular dialogue with reformers and politicians can serve to warn against the unanticipated consequences of a simple tax-increase scheme, even as they point up possible savings in city fiscal reforms and call attention to important sources of revenue unfamiliar outside of business circles.

A second area of pertinent business competence is that of operations research and systems analysis. Many city reform efforts have failed because of duplication, waste, gaps, schedule misses, communication breakdowns, unrealistic commitments, and the sorry like. How can the city effectively coordinate its own reform efforts with those of foundation, parochial, suburban, state, regional, and federal groups? What kind of contribution can a PERT Network or some similar scheme make to the welfare efforts of public and private groups (from chapters of CORE through to Public Health and Welfare Councils). Businessmen who engage in this particular dialogue can introduce reformers and politicians to the latest advances in administrative science, even as they frankly encourage specific reforms of present organizational inadequacies.

A third area of business contribution concerns several sensitive community issues. How, for example, can the slum dweller be better protected against exploitation by unscrupulous real estate speculators, landlords, and retail dealers? Where can the self-help training programs of Negroes turn for proper guidance and material support? What can business do to stay the white exodus to suburbia? And how can the city attract new industry? Businessmen who would concern themselves, for example, with the regulatory issue might explore strengthening the local Better Business Bureau, putting teeth into industry association codes, and accommodating anti-trust regulations within vigorous self-policing efforts. Philadelphia offers a model for business involvement in Negro self-help efforts: The Chamber of Commerce in that city, along with 300 major companies, has given personal guidance and over $500,000 in machinery and supplies to the Eastern Seaboard's most significant self-help effort, Rev. Leon Sullivan's Opportunities Industrialization, Inc.[7] Philadelphia's business community has also pioneered in techniques to hold onto white citizens and profitable businesses; e.g., the construction of new downtown office buildings, the restoration of a large Colonial home area in center city, the creation of a central food distribution center to decongest old sections of the city and hold on to key food-handling firms, and the development of university non-credit courses in Philadelphia affairs for the Junior Chamber of Commerce.[8]

Finally, a fourth area of competence in which the business community can make a special contribution is that of public relations and education. Many city reform efforts have failed to accomplish much because of the unfamiliarity of citizens (urban *and* suburban) with the reform program. Several pressing questions remain: How do reformers reach into the councils of upper-income "influentials"? And where can reformers turn for feedback on public responses to reform efforts (and gaps)? Interested businessmen can make a contribution here by familiarizing themselves with reform plans and explaining these further to other "influentials" (urban *and* suburban). (How many of us, for example, now possess thorough understanding of "vest-pocket" housing, comprehensive social planning, networks of preventive mental health clinics, class-integrated housing projects, "halfway" houses, "enrichment" day-care centers, and residental high schools in slum areas.) Businessmen's tours of slum areas, such as that recently arranged by Philadelphia's Chamber of Commerce to enable business leaders to visit with welfare families, help round out an "education," as do also one-day "tours of duty" with caseworkers, school teachers, instructors in manpower retraining efforts, psychiatric social workers in mental health clinics, interns in welfare hospitals, and the like.

Overall, this point should not be forgotten: Negro advancement and urban reform will succeed or fail *together* – and the business community has much to say about this.

INDUSTRIAL INTEGRATION

This essay's second under-discussed problem concerns the situation that too often develops in the aftermath of industrial integration. The hiring of Negroes in business generally means an end to such problems as the threat or fact of boycotts, picketing, demonstrations, and other forms of outside pressure. It also opens up access to a vast manpower pool (19,000,000 Americans), facilitates gains inside of the $22 billion Negro purchasing market, and accommodates governmental and public pressures for concrete evidence of minority-group advancement. Integration (or hiring) is only the beginning, however, for the mixing of two races where there previously was only one gives rise to particular strains and tensions. Over and again the unusually frank businessman explains: "No one ever said it would be easy. But then again, we didn't really think it would be this hard."

Three kinds of present-day post-hiring problems demand attention: Negro employees are expected to behave in super-human fashion, and all are damned when some do not. Similarly, white employees are expected to behave in super-human fashion, and all are "understood" when some do not. Finally, mutual distrust is the order of the day, with status and image thought to be more valuable than justice and progress.

Especially in situations where Negroes are brought into previously all-white work places, but also in many up-grading situations, too much is expected of the Negro employee. Essentially, a Negro "pioneer" is expected to combine pride and humility, wisdom and receptiveness, strength and tolerance, soberness and humour, aggressiveness and patience, ambition and satisfaction, and all this simultaneously and in delicate balance. The job profile is unrealistic; the strain can prove too much for a mere mortal – regardless of his skin color.

When a "pioneer" momentarily "forgets" the expected balance and laughs too hard, too long, or not at all; or when a "pioneer" momentarily "forgets" and comes to work preoccupied with serious personal problems; or when, in short, a "pioneer" behaves at a point much like any other employee occasionally does, a confidential crisis develops. The whispering starts. In no time at all, the verdict is widespread: "That 'great' Negro the management brought in to satisfy the NAACP has shown his feet of clay." Or: "Sorry, but that Negro we all tried to help just has not worked out."

White co-workers often find themselves in much the same kind of situation. Too much is expected of them, not simply as employees in problem-fraught areas, but as individuals. Essentially, a white employee, and especially a supervisor, is expected in an integration situation to combine firmness with flexibility, impartiality with partiality, distance with closeness, objectivity with understanding – and all this simultaneously and in delicate balance. Again, the job profile is unrealistic; the strain can prove too much for a mere mortal – regardless of his skin color.

When a white employee momentarily "forgets" and anxiously seeks to curry favor with new Negro employees, or when a white supervisor "forgets" the expected balance and publically berates a Negro worker, fairly or unfairly, as he might any white; or when, in short, a white co-worker sometimes behaves like any man might, a confidential crisis develops. The whispering starts. In no time at all, several self-serving verdicts are adopted by different groups: "The whites are running scared" or "Good for him, he'll show 'em" or "The supervisor is a bigot" or "He will catch hell from the big-shots for upsetting things. He should know better than to look cross-eyed at a Negro nowadays."[9]

Finally, as is apparent from the above, in many situations mutual distrust is the order of the day. New Negro employees are often suspected of being "NAACP plants," "CORE agents," or "agitators for SNCC," with the standards of evidence generally reduced to the "fact" that they look suspicious, seem "uppity," speak too well, have too much education, or some other such thing. Previously accepting whites often regard upgraded Negroes as beneficiaries of favoritism, rank opportunists, and probably unworthy co-workers. And many white workers subject Negro colleagues to a scrutiny so exacting as to impart far-reaching significance to every act—no matter how insignificant it may be. Negro workers, for their part, sometimes suspect that routine job transfers, job engineering studies, transfer requests, or salary reviews are part of an insulting conspiracy aimed at their being downgraded, bypassed, or removed. And some Negro workers take refuge in false allegations of discrimination to rationalize instances of real personal failure.

Underlying all of this is management's failure to accompany its impressive program of Negro hiring with a sophisticated intergroup relations program of work force preparation and integration monitoring. Management often does not seem clear about what happens *after* the Negro employee is hired or upgraded, and it is bewildered by signs of trouble in morale, turnover, transfer, and productivity. It is time we publically recognized that in too many post-hiring situations, integration has not really taken place, and men are not interacting on relaxed and personal terms. Negroes and whites in these situations do not feel free to be themselves. Neither trusts in the company's objectivity, and both squander the rare opportunity available in integrated shops and offices to challenge the myths of prejudice with facts gained in human contacts.

THOUGHTS ON REFORM

The situation, albeit one with serious, inter-related problems, *is* amenable to reform. To paraphrase the weary complaint with which this section opened, "No one ever said it would be easy. But neither does it have to be so hard."

To begin with, we must squarely face the fact that the challenge is to integrate two groups of mortals, not super-men. While some early preparation is appropriate, Negro "pioneers" and those who follow after should be assured that adequate performance on the job, rather than Hollywood-style role-playing, is the paramount and overriding consideration. White colleagues should have the same point impressed on them, and, as soon as possible, the "solo spotlight" on the "pioneer" should be weakened for having to play over an increasing number of Negro recruits. Negroes should be fired as well as promoted, disciplined as well as commended, treated, in short, much like the men they are. The only thing that should remain "special" about the situation is the insignificance of the race factor.

White supervisors should receive assurances that good supervisory practice will be backed by the company, regardless of internal or external pressures from groups who innocently or deliberately allege discrimination. Attempts at extortion by Negro opportunists or white segregationists, however subtle, should be firmly dealt with – the company not shying from discharge where warranted. Attempts at race provocation, whether originating from white or Negro racists, should be similarly handled. Above all, employees should be helped to recognize a distinction between patient and reasonable support of the previously-deprived and unwarranted favoritism in overlooking errors, forgetting delinquencies, or allocating rewards.

SUMMARY

On closer-than-usual examination, two unsettling problems we sometimes sense, but seldom discuss in public, take on a new character. Racial integration in business appears more strained than company public relations officers would admit, even as it is more open to improvement than the compact of silence concerning it suggests. Negro advance and urban reform are both threatened by certain social trends, even as both can profit considerably from business recognition of their interdependence and expanded business involvement in remedial campaigns. The under-discussed problems reviewed in this essay *are* resolvable – if men involve themselves and act.

FOOTNOTES

1. I should like to thank a colleague, Dr. Everett Lee of the University's Department of Sociology; an associate, Mr. Paul Dandridge of the Philadelphia Commission on Human Relations; and a personal friend, Mrs. George Flemming of the Philadelphia Child Study Center for their assistance in reviewing this essay. The final version is entirely my own responsibility; only its strengths can be traced to the other parties named.
   Other sub-rosa items that demand a public airing include the sexual content of inter-group hostility, the inevitability of losers in a competitive order, the vast implications of de facto housing segregation, the minority position of whites in the world, and the like. My choice in this essay was dictated as much by the volume's focus and space limitations as by any emphatic personal ranking by "significance."
2. Sidney M. Willhelm and Edwin H. Powell, "Who Needs the Negro? From the Economics of Exploitation to the Economics of Uselessness," *Trans-Action,* September/October, 1964, p. 4. Note that the fertility of Negroes remaining in the South is such as to increase the absolute total of Negroes left in the region, even while the South loses through emigration Negroes in the most productive age bracket (18 to 34 years of age). The North has a rich resource in its influx of able-bodied, ambitious adults – if only both the North and the new arrivals can adjust to one another. For some disturbing thoughts in this connection, see Rose Stamler, "Acculturation and Negro Blue-Collar Workers," in *Blue-Collar World,* edited by A. Shostak and W. Gomberg (Englewood Cliffs, New Jersey: Prentice-Hall, 1964).
3. "Geography and the Negro Problem," *U.S. News and World Report,* August 26, 1963, pp. 50-51. In 1910, nearly 2.7 million Negroes lived in urban areas, with 7.1 million living on the land; in 1960, 13.8 million Negroes lived in cities, and only 5.1 million remained on the land. "The urbanization of the Negro . . . has served both to sharpen his own mood of rebellion and to dramatize his plight before the white world." William Brink and Louis Harris, *The Negro Revolution in America* (New York: Simon and Schuster, 1964), p. 39.
4. Willhelm and Powell, *op. cit.* "No basic change has taken place in the design reported in 1961 by the United States Commission on Human Rights." "There is an ever-increasing concentration of non-whites in racial ghettos, largely in the decaying centers of our cities – while a 'white noose' of new suburban housing grows up around them." Nat Hentoff, *The New Equality* (N.Y.: The Viking Press, 1964), p. 121.
5. See in this connection, Staughton Lynd, "Urban Renewal – For Whom?" in *New Perspectives on Poverty,* edited by A. Shostak and W. Gomberg (Englewood Cliffs, New Jersey: Prentice-Hall, 1965). See also Bernard Weissbourd, *Segregation, Subsidies, and Megalopolis* (Santa Barbara, California: Center for the Study of Democratic Institutions, 1964); Alvin L. Schorr, *Slums and Social Insecurity: An*

Appraisal of the Effectiveness of Housing Policies in Helping to Eliminate Poverty in the United States (Washington, D.C.: U.S. Government Printing Office, 1963); Robert Weaver, *The Urban Complex: Human Values in Urban Life* (New York: Doubleday, 1964); Leonard J. Duhl, ed., *The Urban Condition: People and Policy in the Metropolis* (New York: Basic Books, 1963); Alexander L. Crosby, *Citizen Action for Housing and Renewal* (Pittsburgh, Pa.: United Steelworkers of America, 1964).

6. Note the important precedents for business involvement here available in the current contribution of business to manpower retraining efforts (OJT, manpower needs projections, etc.) and the Job Corps Program of the Office of Economic Opportunity (Philco, for example, is helping the University of Oregon set up a residental job training center for 1,250 male high-school dropouts; an I.T.T. subsidiary is helping Rutgers University; and Burroughs Corporation is assisting the University of Pennsylvania). Business has long cooperated in welfare endeavors through rehabilitation services to parolees, former alcoholics, ex-mental patients, and the physically handicapped, along with its tradition of philanthropic leadership.
7. An excellent discussion is available in Hannah Lees, "Self-Help in Philadelphia," *The Reporter*, December 17, 1964.
8. *Fortune* advises here: ". . . that flexible instrument, the U.S. industrial corporation, has a large part to play in eradicating 'the shame of the cities.' Indeed, the possibilities of redevelopment are endless. . . . As an extreme example, why not a project in Harlem that would combine slum clearance with corporate investment in fabricating plants, which would help provide jobs as well as roofs for those who need them? This kind of thing would be quite impossible for government alone to pull off, but is not impossible once corporations have been brought into the process." Hubert Kay, "The Third Force in Urban Renewal," *Fortune*, October, 1964, p. 214.
9. A rare public discussion of the matter is available in the symposium in the April, 1964 issue of *Management Review*, "Equal Employment Opportunity: Company Policies and Experiences." Considerable word-weighing is obvious, and the reader is advised to "read between the lines." See also Arthur B. Shostak, "Human Problems in Improving Industrial Race Relations," *Personnel Administration*, March/April, 1963; and *Wall Street Journal*, August 12, 1963; Eli Ginzberg, ed., *The Negro Challenge to the Business Community* (N.Y.: McGraw-Hill, 1964).

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UTILIZING THE DROPOUT

C. Virgil Martin*

The high school dropout is most certainly a fit subject for this symposium. His job opportunities are definitely limited. His race or color may well handicap him further, but, no matter what his ethnic make-up, the dropout is in trouble when he seeks employment.

Let me say at the outset that I believe the question of equal opportunity, and the related problems of unemployment and dropouts, can and will be resolved within our free enterprise system. Resolved not only out of altruistic motives or a desire for social betterment, but also simply because it is good business.

We must stop thinking of the Negro, the dropout, the unemployed, and the unemployable as nameless statistics. They are potential wage earners, taxpayers, customers and a rich source of energy, innovation, and contribution to our communities. To write them off as "hopeless" or content ourselves with "paying them off" with welfare subsistence would be folly – it would be to cheat ourselves of their potential contributions.

I guarantee that, after Carson Pirie Scott's experience with utilizing the high school dropout, both Negro and white, from culturally deprived areas and affluent ones, we will continue to recruit dropouts as worthwhile productive members of our firm.

After three years of experience with our Double EE Program – EE standing for "Education and Employment" – interesting statistics about these youngsters have been amassed, and we have learned how they respond to counseling, to a meaningful combination of schooling and work experience, to a personal interest in their lives and futures.

The Chicago business community first became fully aware of the problem of our alarming dropout rate and its implications through the missionary efforts of Dr. Benjamin Willis, Chicago's school superintendent. It did not take a special degree for certain of us to translate his alarming dropout figures into burgeoning relief rolls, lost income, and reduced purchasing power – particularly where there was an additional problem of equal opportunity. Dr. Willis pointed out that in some parts of the country the percentage of high school non-graduates is running as high as 40 per cent, and that in Chicago alone, some 10,000 drop out of high school every year.

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Superintendent Willis asked Carson's if it would cooperate in an effort designed to provide employment for dropouts in a setting which would at the same time provide both the motivation and the opportunity to continue their schooling. We took it up with our personnel staff. Their reaction was not negative, but it was not all positive either. They were quick to point out the problems that would inevitably rise with employing considerable numbers of what were, in effect, society's "rejects." Without special work-related schooling, further development was doubtful; without guidance and counseling, they were quite apt to get swallowed up in Carson's nine floors and hundreds of employees; without additional social "orientation," we could hardly expect them to gain acceptance from customers or fellow-employees. Despite these problems, we decided to go ahead on a trial basis.

A PILOT PROGRAM

The final pilot program, which we hammered out in long sessions with school officials, covered all of these aspects. Carson's agreed to furnish classrooms, training facilities in the store, wages at a beginning scale, and a regular stipend for books and transportation. The Chicago School Board was to furnish, besides the dropouts themselves, teachers and guidance personnel under an initial special grant of $50,000, which Ben Willis and I were able to get from the Ford Foundation.

Our first class of 66 was screened and selected by school officials; Carson's only stipulation was that they be able to pass our regular physical examination. They ranged in age from 15 to 17, represented virtually every section of the city, and a little more than 50 per cent were Negro.

Together, we worked out a program whereby the youngsters would work three days a week and go to school two days, earning credit toward their high school degrees for the time spent in school. We are open six days; thus, two of them actually filled one job.

Each youngster was placed under one of our college graduate trainees as counselor. The counselor's job was to show a personal interest in his charge, help him with his problems and set a good example of behavior. This, we found, was one of the real keys to the success of the operation. Part of the reason that many of these children dropped out of school was the inadequacy of their parents to cope with life. The youngsters needed someone to talk to – to tell them how to dress, to behave, and to relate to others.

Most of this first group were placed, at least temporarily, in sales jobs. We soon found that we had to review arithmetic to enable them to write sales checks. But we also found that, for the first time in their lives, one of their studies had meaning – it related directly to something they were doing every day – and overall progress was excellent.

After the first five or six weeks, we allowed them to organize their own curriculum, and the first subject they requested was English! Remember that many of these youngsters had a fifth- or sixth-grade reading level, and most had shown very little interest in communicating. Yet, here they were, asking that English be a major part of their studies.

Why? My guess is that, in those few short weeks of dealing with people on a person-to-person basis in a practical situation, they felt a need to communicate – because they had found something to communicate about. Their lives had taken on a new meaning, and they wanted to express this and to become a part of the new world they had found.

We had given them a *reason* for going to school. For the first time they saw the relationship of the studies they had been pursuing – or not pursuing – to working and earning a living. As one of the more articulate members of this first group put it upon his "graduation" from the Double EE program, we "gave them back their lost incentive."

We were careful to keep these people on regular standards while they were on the job; we insisted that their performance measure up to that of their fellow-workers who had been hired off the street, and many of them actually excelled.

The lowest I.Q. we found in the whole group was a nice, but nondescript, little girl named Joan, who tested 80. Now, most of us would despair at an I.Q. this low and be willing to give it up as a bad job. But Joan's counselor discovered that she was interested in – of all things – leather goods. She was thrilled just to be around leather, and said that someday she hoped to own gloves and a handbag of her own.

Checking back to the high school, the counselor found that, sure enough, just about the only interest she had shown there had been in leather-tanning and manufacturing, anything to do with leather.

Here was a girl who had great difficulty in mastering the basic arithmetic needed to make out a sales slip, but we put her in the handbag department, and within six months she was writing more business per hour in her three-day week than any other girl on the floor. In fact, other people in the department had taken to consulting her on the qualities of various leathers. Her appearance improved remarkably, and today she is one of our most productive workers, even though the chances are she will never finish high school.

Of course, not all of them remained in sales. Some who did not do well meeting the public were transferred to stock or food service or central wrap — wherever there was a job they could fill which was better suited to their temperaments and abilities.

Much of their school work centered around retailing and, specifically, around the place of the individual within the store structure. Class sessions dealt with the role each one of them played in the broad spectrum of retailing, with the importance of their duties to the whole operation.

And beyond on-the-job training and work-related schooling, the youngsters were given an orientation to society and an insight into self-management.

Class sessions were held on the individual's rights and responsibilities under the law. The class was addressed by a judge and by lawyers; later the youngsters participated in mock trials in common kinds of cases in which they might become involved. They invited guest speakers from the Social Security administration and Internal Revenue office. After the first payday, it was apparent that they needed help in budgeting, and after that they kept careful accounts of their expenditures and earnings. Credit buying, interest rates, and financing plans were compared and explained.

All of the subjects they had rejected as a part of their formal high school experience — civics, mathematics, English, business and commercial subjects — suddenly became intensely interesting because they were no longer meaningless mumbo-jumbo, but had become an important part of their workaday life.

Every effort was made to involve the parents in the goals of the program and the progress of their youngsters in achieving them. We found that many of the parents, rather than deliberately neglectful, suffered personality defects and inadequacies themselves. They had lost contact with their children, and most of them were grateful for a chance to share something with them.

One year later, this pilot Double EE effort ended with well over half still active, and these were asked to remain on the payroll. We had lost some to marriage, others to Uncle Sam, and some had returned to school full time, but out of the original 66, we had a lower turnover than we normally have in our general employment group. There are only a few of that first class still employed at Carson's, but I can assure you – and I think this is the most important thing we have learned – they are among the most productive and certainly the most loyal employees we have.

EXPERIENCES UNDER THE PROGRAM

So far, 186 boys and girls have received Double EE training at Carson Pirie Scott & Company. Many have succeeded, some have failed. But the record of this 186 is studded with success stories – stories which dramatize the kind of losses our society will suffer if we allow these youngsters to drift into jobless oblivion. Let me cite a few of these:

Susan, at 17, did not like school because she had no friends. Her poor record of achievement had made her the official "dunce" of her high school class, and the other students made fun of her inabilities. When her hostility expressed itself in petty theft, she left school by mutual agreement with officials. Enrolled in the Double EE program, she began to consult her fellow students on personal grooming; they took her under their wings, developed a protective attitude toward her, and her appearance improved. She gained, almost overnight, a confidence in herself that had always been missing or deeply buried. Later, she left Carson's and joined another Chicago retailer where she now has a stable and productive life.

Peter, whose only interest seemed to be stock car racing, became such a discipline problem in the Double EE school that he was suspended. But, through counseling by his "big brother" at Carson's, he was made to see the inter-relationship between his schooling and his job, and the importance of one to the other, and he began straightening out. His attitude changed almost overnight, with the result that the director of the program tutored him in trigonometry, and he was successful in his studies. When he left the program, he was accepted into the Army – and we must remember that 50 per cent of our youth are rejected from military service – and Peter now intends to finish high school. I recall that, when Peter came to Carson's, he sported what is known as a "ducktail" haircut. As he progressed in the program, his hair was cut shorter and shorter, and the counselors actually started using it as an index of his sociability.

Sandra, at 16, was an unwed mother. Through her Double EE assignment in the billing department, she became a skilled biller and, upon completing her training, went to work full time and enrolled in night school. When a data processing change took her billing job, she was given another job in sales and continued typist training evenings. Though she was loud and brash at first, she greatly improved in attitude as she progressed. Now a full-time secretary, she has graduated from high school and is attending a junior college while her mother takes care of the baby.

Remarkable? Not at all. Joan and Susan and Peter and Sandra were not lacking in abilities or a desire to achieve. It is difficult to generalize, but I believe the thing they needed most was motivation: someone to take an interest in them, a role in a society which had lost meaning for them, recognition, encouragement, understanding.

These ingredients were supplied by the Double EE program, by parents and teachers and work supervisors and counselors working in concert and toward the common goal of the rehabilitation of one individual. And we must never forget the hours and hours of patient and unrewarded labor that have been invested in each one of these youngsters. Were the results worth it?

SOME RESULTS OF THE PROGRAM

Our Double EE people assure us that Carson's is dollars and cents ahead on our investment.

Ben Willis can boast that his brainchild has salvaged scores of youngsters from a lifetime of hopelessness and despair — youngsters who could not be reached through conventional educational methods.

We will have to leave it to social scientists to calculate the benefits society can expect from these youngsters as productive citizens rather than social problems, destined for a life on the welfare rolls — or worse.

But you can only learn the real answer to that question by watching these boys and girls in action — on the job or in the classroom —their faces eager, alert, and alive.

If you would like more evidence, I will cite a recent survey of 62 students who finished the program in May of 1963:

— 35 are employed full time, 23 by the company which hired them while they were students in the Double EE phase.

– 5 are in the armed forces.
– 4 have married and are housewives.
– 12 have returned to full-time schooling.

And, if one adds those figures up, the answer will come out close to the total of 62; in fact, all but one have had some kind of employment since their Double EE days.

Now, let us turn to the history of Double EE since those first tentative and exciting days of the pioneering effort.

The Idea Spreads

Needless to say, Dr. Willis has done a great deal of missionary work on behalf of the idea in the past three years. And since I saw the results with my own eyes, I have been known to stump around a bit myself. Carson's was only the first company that he managed to sell on the idea; at last count, more than 30 firms in the Chicago area alone have done their own experimenting with it, including such venerable names as A & P, National Tea, Sears Roebuck, the Fair Store, Prudential Insurance, Honeywell, and the Conrad Hilton.

At present, there are more than 100 present or past Double EE students at work in any number of jobs in Chicago and at many levels of responsibility and a total of some 300 in various phases of training across the country.

The program has drawn nationwide attention through the press and, particularly, through the granting to Carson's of a "Retailing Serves America" national award by the *Reader's Digest* and National Retail Merchants Association.

That is pretty dramatic progress for a program which three years ago was no more than an idea in a schoolmaster's head.

And the implications of "Employment plus Education" – or, if you prefer, "Utilizing the Dropout" – as one approach to the related problems of equal opportunity and youth employment go far beyond these relatively small numbers.

Lessons Are Learned

One of the most significant, I believe, is what we have learned about the Negro as a worker. Now, Carson's has followed a nondiscriminatory hiring policy for many years, and we have benefited greatly by it. The simple fact is that, where many doors are closed, those that remain open admit a wide selection. We have been able to choose from a number of very excellent people for any job opening.

The Double EE experience afforded us our first experience over a long period with the "other" Negroes — those who, because of youth and lack of education and training and cultural deprivation were hardly equipped to compete for *any* job. And the results have been outstanding.

While we have not kept many statistics on the matter, the nonwhites in our program have done as well as or better than their peers. Given equal opportunity, they are quick to recognize it and take advantage of it.

And the great value of training like that given these youngsters is the fact that Double EE provides a mechanism to break the vicious cycle in many underprivileged families in which illiterate and often inadequate parents can provide neither example nor incentive for their offspring. In such cycles, poverty begets poverty.

Through efforts like the Double EE, business and industry can provide substitutes for inadequate home environment. Our counselors become, in effect, mother and father figures and thus help eliminate one of the major causes of high school dropouts — inadequate parents and inadequate homes. As part of their regular responsibilities as Carson's employees, these counselors are assigned "big brother" roles with individual Double EE students, but most of them gave much more than was expected in the line of duty. Many of them gave extra hours to tutoring and personal counseling, and it is my impression — I do not have actual figures to back this up — that our turnover rate among employees assigned this job has been much lower than normal.

Of course, business can't make up for deficiencies in the children themselves, but it can, through patient study and attention to the problem, find the right job for someone who would be unhappy and a failure in most other jobs. It can, through programs of employee relations, guide and nurture these youngsters and draw the very best out of them.

Business and industry also can work with education. By providing an objective and informed viewpoint, it can give boards of education the knowledge and stimulation that will help them to keep their curricula flexible, viable, and functional.

It may well be that modern-day educators feel they have resolved the conflict between those who stress the liberal arts and those who would teach every boy a trade. However, I do not believe this is true. I do not really believe that the problem will stay resolved. And certainly, there is no general agreement in all parts of the country on an ideal curriculum for high-schoolers.

As recently as 1961, James Conant, in *Slums and Suburbs,* offered the partial solution of

> ". . . developing meaningful courses for pupils with less than average abilities. To this end consideration should be given by every school and community to the expansion of work-study programs for slow students, and to the provision of at least an auto mechanics shop for boys in every high school in metropolitan areas."

Obviously, Conant's studies have shown that many areas — even large metropolitan areas — are still woefully inadequate in technical high school training facilities and programs.

VARIOUS APPROACHES FOR BUSINESS

Here is another way business can serve. Could not a dedicated committee from a cross-section of business and industry be helpful to the boards of education in answering questions like these:

1. Do our schools offer adequate training to the boy or girl who obviously is not college material, so that he or she can earn a living?
2. If technical courses *are* available, are teaching methods and equipment up to date with modern developments?
3. Are we developing skills for which there is no longer a need?
4. Are we overlooking — and I am very certain that we are — many areas in which the high school dropout or graduate could be happy earning a living?

Personnel directors in our industrial organizations could list, as an aid to educators, such untaught skills as, for example, the many specialties in the preparation of food, appliance servicing, and landscaping. But, industry need not confine itself to the educational system in its efforts to cut down unemployment.

In Chicago, the brilliant director of the Cook County Department of Welfare, Ray Hilliard, has given impetus to a dramatic movement to train welfare recipients to get jobs *with the help of industry*. It began with his conviction that there were enormous numbers of people who could not find jobs because they were illiterate — or almost so.

His research verified this belief. In Cook County in 1962, more than 50 per cent of the welfare recipients were so-called functional illiterates. This means that their reading level is 5th-grade or below and that most of them cannot find a job — let alone hold one. Of this group, almost 7 per cent were totally illiterate or Spanish-speaking, meaning they could not dial a telephone, read a want-ad or street sign, and would be afraid to ride a bus through unfamiliar territory.

By actually coercing these adults back into special schools, he has been able to train and find jobs for thousands as cab drivers, practical nurses, waiters, and in many other occupations.

The challenge to industry is simply this: are industrial leaders going to be able to see beyond the initial expense to the rewards to themselves and to the community at large of *this* kind of cooperation with educators and relief officials?

I think they are.

The stimulus is not always so remote as the higher taxes which industry must pay for welfare payments to the unemployed. There are other and more direct considerations.

Sometimes a company president finds himself in a situation which illustrates his company's involvement very directly with such problems. When Carson Pirie Scott & Company, for example, was staffing the Seven Continents restaurant and all of the other restaurants we operate at O'Hare International Airport in Chicago, we found a very serious shortage of master chefs, pastry chefs, salad chefs, even waiters and second cooks — and this at the same time that relief rolls were rising. Obviously, it is not strange for a company president under these circumstances to decide to do whatever he can to correct a ridiculous situation.

I might add that we at Carson's have taken some initial steps toward solving this particular problem and are training youngsters in food service both at the downtown store and at our airport restaurants.

And, in all honesty, the willingness with which we participated in the Double EE program grew out of many such experiences as this.

CONCLUDING REMARKS

The problem of providing equal opportunity does not lend itself to simple formulas. The barriers which must be faced by a teenage Negro in getting a living and just getting along must seem insurmountable. Not only must he contend with prejudice, but with a prejudicial heritage of inequalities which make it doubly difficult for him to master even the most basic tools of competition in a free enterprise system.

In this era of expanding technology and multiplying wealth, we are finally beginning to realize that it is possible to improve the lot of the poor without taking or taxing it from the rich. This myth — the redistribution of wealth — is fast disappearing. We have seen that increased production and aggressive marketing can generate an economy that will accommodate all Americans. For the first time in history, phrases like "War on Poverty" and "Full Employment" are being accepted as something more than impossible visionary dreams.

But we have also discovered that the vital missing ingredient in realizing an end to poverty and jobs for all is education. With a good education, the Negro can make his way in the face of the most violent prejudice; without a good education, the middle-class white will likely meet failure after failure in job experiences.

The importance of programs like the Double EE is that they make education more palatable, more meaningful, and in many cases, economically feasible.

Businessmen can no longer allow themselves the luxury of skimming the cream of high school and college graduates, competing intensively for the very best, and allowing the underprivileged and mediocre to find what work they can. Business must take immediate action to assure equal job opportunity, not because it is now the law, but because it is both morally right and good business to do so.

And the responsibility of business does not end with equitable employment practices. If, for reasons of prejudice or cultural deprivation or what we might call the "education-gap," many Americans are, indeed, *not* "equal," businessmen must do more. They must do all in their power — under the system of rights and responsibilities we call "free enterprise" — to give these "unequals" jobs, to train them, to educate them, to mold them, to work with them in removing these disparities and to make of them valuable employees and productive citizens.

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A PROGRAM FOR HIGH SCHOOL DROPOUTS IN BAMBERGER'S, NEW JERSEY

Charles W. Garrison*

At a time when American business faces an imminent shortage of such skilled workers as trained machinists, tool and die makers, dental technicians, metal workers, electricians, nurses, auto mechanics, and dietitians — at such a time, one out of three students who enters high school fails to graduate. In New Jersey, for instance, there are 50,000 boys and girls currently out of school and out of work.

A Bureau of Labor Statistics Report states that 70 per cent of these students have normal or above-average I.Q.'s, and a surprising 10 per cent are of college ability. Without a proper education, however, they find job-getting a very difficult problem. High school dropouts usually are written off as academic, social, and economic liabilities. They therefore end by swelling the ranks of the unemployed and frequently becoming candidates for the relief rolls.

WHY STUDENTS DROP OUT OF SCHOOL

Why do these students drop out of school? School authorities point out that lack of motivation is the reason in many cases. If a student sees no hope of getting a decent job in a society where the new jobs being created by industry are getting further and further out of his reach, he sees no point in sweating out the long, hard grind of getting an education. One of the greatest contributions management can make to these troubled boys and girls, therefore, is to provide them with a sense of hope. In realizing this our personnel division decided in the latter part of 1962 to take a direct approach to the problem.

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*Senior Vice-President, Bamberger's, a division of R. H. Macy and Company, Inc.

THE "D" SQUAD PROGRAM

The plan, which is called the Diploma or "D" Squad Program, seeks to accomplish the following:

1. To find some of New Jersey's dropouts and encourage them to finish high school by giving them adult responsibilities, earned cash, and a sense of being needed.
2. To aid in educating the public by calling attention to the economic and social implications of the present situation.
3. To open the door for other businesses and industries to frame similar solutions to the dropout problem.
4. To sponsor a work program that provides an incentive for the dropout to stay in school and that can be perpetuated without "creating" jobs.
5. To cultivate a new source of talent by providing a training ground for the development of future full-time personnel.

All of our eight stores make available evening employment as stock clerks or messengers, as vacancies occur, to qualified high school juniors or seniors who have dropped out or who are thinking of dropping out of school. Employment is given only on condition that the individual *return to* and *remain in* school; maintain satisfactory grades, attendance, conduct, and health; and perform his job satisfactorily. The agreement with the students and with their schools is that the company is permitted to fire them immediately if they do leave school. In addition, a career in retailing is possible for any member of the "D" Squad upon graduation from high school.

The stores operate on a two-shift schedule and can accommodate upward of 80 boys and girls in a year's time. At the outset, only those dropouts who were college material were recruited; but after an initial period of defining and redefining valid criteria for judging applicants, we decided to fill vacancies from among all those whose test scores and school records indicated they were capable of completing the work necessary for high school graduation and whom we felt we could salvage.

Initial referrals are made by vocational counselors in the schools of communities where our stores are located. The placement or guidance counselor is contacted by letter, and a form is provided by which the counselor can recommend a student. The counselor is asked to indicate whether test scores and school records indicate that the applicant is capable of completing the work necessary for high school graduation. It is made clear that the student must return to and continue in school in order to remain in Bamberger's employ. The reason why the student had left school is sought.

The referrals are interviewed by the personnel manager, who rates them with respect to appearance, personality, motivation, attitude, integrity, reliability, sense of responsibility, and financial need. The accompanying exhibit is a sample of the interview appraisal form used. They must also score satisfactorily on a Wonderlic Test and get approval and permission from their parents before they can be placed into positions in the stores. A letter is sent to the parents which explains the "D" Squad, and a form is enclosed which the parent must sign to indicate approval of the program and to give permission for the student to be employed. The parent agrees that the applicant must remain in school in order to continue working at Bamberger's.

The employment manager in each Bamberger store is responsible for the operation of the "D" Squad. He coordinates all correspondence among parents, counselors, school principals, and so on, utilizing appropriate "D" Squad forms. In his periodic checks with the school counselor, the employment manager asks him to rate the member of the "D" Squad on grades, attendance, conduct, and health, since eligibility to remain on the Squad depends on satisfactory attendance and grades at school. He also reviews the performance of all "D" Squad members monthly. In the review, he asks the member's supervisor to report on attendance, the quality and quantity of work, willingness to cooperate, initiative, appearance, effort, and any comments or recommendations which the member's department head sees fit to make.

PERFORMANCE UNDER THE PROGRAM

"D" Squad members have performed well in their duties. Among the first recruits were James Epp and Richard Dixon, both seniors at South Side High School in Newark. James was placed in the customer returns room and Richard in the addressograph department. Both subsequently graduated from South Side High School and are now in the U. S. Marine Corps.

We also have had failures, including a student who quit after misrepresenting the nature of his need for employment. Out-of-school training of the dropout is sometimes difficult because of his emotional block against formal learning. But the results to date have, on the whole, strengthened belief in the program and the feasibility of similar programs in other areas of industry.

The number of would-be dropouts saved by our stores may seem to be nothing, statistically, against a backdrop of 700,000 unemployed young people. The number is certainly nothing compared to the 1.5 million who will be idle if current trends persist. But we feel it is important to do whatever we can. Through programs such as this, the store helps accomplish the following: (1) it validates its responsible position in the community and also furthers enlightened self-interest; (2) students reclaimed through such activities add to the economic well-being of the country; and (3) they provide a source of stable, experienced personnel who can enrich themselves and the industry in retailing careers.

CONCLUDING REMARKS

Every firm, school, and parent in this country has an important contribution to make towards the solution of the problem. There is a crying need for more youth employment programs. Furthermore, a concerted effort to enlist the cooperation of every responsible segment of the community should be made, for to assist in the solution of this problem is to invest in the long-range economic health and stability of the communities in which we live and work.

APPENDIX
THE NEWARK DROPOUT PROGRAM*

In a pilot program, 100 unemployed high-school dropouts are being offered jobs in Newark by six major corporations – if the dropouts will enroll in a special high school being set up in downtown Newark. The program, which was suggested by the companies, is backed by the Board of Education of Newark, and the New Jersey Departments of Education and Labor. Participating companies are Standard Oil of New Jersey, Prudential, Bamberger's, Western Electric, Westinghouse, and New Jersey Bell Telephone.

The Board of Education is establishing a special high school in downtown Newark just for the dropouts, staffing it with experienced personnel, and providing it with a special curriculum. On the state level, Dr. Frederick M. Raubinger, Commissioner of Education, has recommended that the Department of Education grant money from its emergency fund to help support the project.

The Department of Labor's Youth Career Development Center is culling its list of 5,000 Newark dropouts for 300 candidates. These will be screened down by the Board of Education to the 100 who will participate in the pilot project. The youths selected will be boys or girls between the ages of 18 and 21, with a year or two of high school still to complete. They will be paired two to a job. One will work while the other is in school.

The subjects given in the special high school will be the same as those given in the regular Newark schools, but adapted to the needs of employed students. They will include English, mathematics, social studies, business education, and job orientation.

No employees will be replaced to make work for the dropouts, nor, when the dropouts earn their diplomas, will the companies be committed to offer them continued employment. Under the plan, each participating company will use its own salary schedules and conditions of employment applying to the jobs in which the students are placed. When a student leaves the program, or graduates from it, his place will be taken by another qualified candidate.

The head of the special school, with its enrollment of 100, will be Irving J. Goldberg, former administrative assistant at Weequahic High School. He will be assisted by four experienced Newark teachers of academic subjects plus three teachers specially trained as work-study coordinators and by two full-time guidance counselors and a social worker.

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*The Industry Work-Study Group of Newark.

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THE NEGRO WORKER IN PHILADELPHIA*

Leonard Rico**

The development and efficient utilization of manpower resources is a problem of increasing concern to the nation. This recently has been exemplified by the dilemma of finding suitable jobs for unemployed millions willing and able to work. One manifestation is the Negro's search for economic opportunity in the contemporary urban setting. The employment situation in large metropolitan areas challenges the ability of private and public institutions and leaders to come up with new ways to ease the social costs of economic change. Yet, it is precisely this dynamic quality of the economic environment which exacerbates the Negro, who often is unprepared or not permitted to enjoy areas of expanding job opportunities, while he is prepared or permitted to seek traditionally marginal jobs or non-traditional jobs with a declining demand.

Do equal employment opportunities exist for all citizens regardless of color? The answer to this question may be found by examining labor market data. Increasingly we have come to recognize that the quality of a nation's human resources is integral to its economic development and well-being. The American dream of the good life attained through self-improvement and equal opportunity supports the image of a purely competitive model of the labor market.

This paper, to a limited degree, questions whether or not a free market exists for the Negro worker in Philadelphia. The perfect labor market, in theory, assumes a homogeneous supply of labor to a firm or industry. In this system each hypothetical worker, seeking to maximize his wage, is perfectly mobile and willing to move whenever a higher differential wage is offered by another firm. All workers have perfect knowledge of alternative job opportunities and wage rates in the labor market. It is further assumed that each employer seeks the worker who will accept the lowest wage; the employer always is willing to replace his current workers for others who will work for lower wages. Also, the labor market is cleared by a single wage rate which no single employer can affect significantly, and no one willing and able to work remains unemployed. In addition, there are no labor unions or governmental regulations and controls to alter the operation of natural market forces in determining employment and wage decisions. Finally, there is no collusion, favoritism, or discrimination among the participants to the wage contract which gives any individual or group an economic advantage in the contractual wage agreement.

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*The author acknowledges the research assistance of E. Barksdale Kizer, a Wharton School graduate student. The help and counsel of Paul Dandridge and Gordon Alexander, both of the Philadelphia Commission on Human Relations, are appreciated. This study was financed with the aid of a grant from the General Electric Foundation.

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Of course, knowledgeable observers of labor market dynamics find it impossible to accept this abstraction of reality. There are, to be sure, but few examples to support the notion that labor markets exhibit, in full measure, the qualities mentioned above. Labor is not homogeneous, perfectly mobile and knowledgeable, motivated only by money, and unmindful of job security. The labor market is imperfect ("structured" or "institutional"), subject to union control (monopoly power), management control (monopsony power), and governmental restraints.

While the labor market is not perfect by any means, it is less imperfect for some workers than for others. Each individual faces different labor market barriers. Individual differences, motivation, and circumstances undoubtedly affect job-related achievements. Personality and cultural differences also influence employment decisions. However, employment discrimination, per se, already has been outlawed in many states and municipalities and will be outlawed in interstate commerce as well by July, 1965.

Nevertheless, labor market barriers based upon color have existed and will continue to exist in degree indefinitely. The major assumption of this paper is that differential patterns of employment, occupation, and income reflect and measure the degree of past and present systematic employment discrimination practiced against the Negro worker. Further, there is no inherent or innate physical or mental quality which justifies these differentials, or which precludes the Negro from full participation as an equal in every respect in the labor market.

Thus it is the purpose of this paper to explore the participation of the Negro as a member of the Philadelphia work force. To this end the paper documents the structure of the Negro's qualifications, status, and role as a worker in Philadelphia, with an eye toward providing a basis for greater understanding of Negro employment problems as well as a basis for policy alternatives to reduce racial barriers to equal employment opportunity. First, various labor market characteristics of resident white and non-white workers of Philadelphia are described and compared. These data are based primarily upon statistics from the United States Census. Then the data are summarized, and relevant conclusions are drawn.

LABOR MARKET CHARACTERISTICS OF PHILADELPHIA NEGROES

The characteristics treated here represent key variables affecting the quantity and quality of the Negro labor supply in Philadelphia, and relate, as well, to the pattern of its utilization. Data on Philadelphia Negroes are presented in the following categories: population and labor force participation; migration, mobility, and concentration; age-sex composition; education and vocational training; industrial and occupational patterns; individual and family income; unemployment and underemployment; and labor union membership.

Population and Labor Market Participation

Philadelphia's recent economic growth rate pattern is similar to that of other old, metropolitan areas of the Northeast. The average annual growth rate for Philadelphia is about half of the national rate, while suburban Philadelphia is growing at from four to five times as fast. The regional economy's growth rate closely parallels that of the national economy.[1] Social changes in Philadelphia reflect these underlying economic developments.

In Tables 1 and 2, population changes by race in Philadelphia from 1900 to 1960 are summarized. In 1960, the white population numbered 1,467,479; the nonwhite, 535,033.[2] The white population of Philadelphia has declined relatively in every decade since 1900 and absolutely in the 1930's and 1950's. Conversely, the nonwhite population has increased absolutely and relatively in every decade since 1900. Since 1900, the white population has increased by 137,803 (19 per cent); the nonwhite population by 471,009 (736 per cent). Other dramatic changes in Philadelphia's population are revealed by the most recent census data.

During the 1950's, Philadelphia's total population declined by 69,093 (–3.3 per cent) to 2,002,512. This overall decline resulted from a net loss of 225,158 whites (–13.3 per cent) and a net gain of 156,065 non-whites (41.2 per cent). These trends are consistent with those of other major metropolitan areas. If these trends continue in the same direction and to the same degree during the 1960's, by 1970 non-whites will number 755,467 (38.3 per cent) of a total Philadelphia population of 1,946,429. The assumption of a constant rate probably underestimates the prospective changes, but the magnitude of the population shift is impressive nonetheless.

TABLE 1

POPULATION BY RACE, PHILADELPHIA METROPOLITAN AREA: 1900-1960

		White		Non-white	
Year	Total Number	Number	Per Cent	Number	Per Cent
1900	1,293,697	1,229,673	95.1	64,024	4.9
1910	1,549,008	1,464,549	94.5	84,459	5.5
1920	1,823,779	1,688,180	92.6	135,599	7.4
1930	1,950,961	1,728,457	88.6	222,504	11.4
1940	1,931,334	1,678,577	86.9	252,757	13.1
1950	2,071,605	1,692,637	81.7	378,968	18.3
1960	2,002,512	1,467,479	73.3	535,033	26.7

Source: "Philadelphia's Non-white Population, 1960." *Report Number 1, Demographic Data.* Philadelphia Commission on Human Relations, Nov., 1961, Table 1.

In 1960, Philadelphia's resident labor force numbered 851,000, a decline of 40,000 (4.6 per cent) within the past decade.[3] By 1962, the labor force had increased by 17,000. It is predicted that by 1970, the labor force will have increased to 914,500. In 1960, 218,923 (25.6 per cent) of the work force were nonwhite, while by 1970, it is forecast, 313,381 (34.3 per cent) of the work force will be nonwhite.[4]

Migration, Mobility, and Concentration

The nonwhite citizen of Philadelphia has experienced higher migration and mobility rates than the white. As indicated in Table 3, 5 per cent of Philadelphia's nonwhite population and 3 per cent

TABLE 2

POPULATION CHANGES BY RACE, PHILADELPHIA FOR INTERCENSAL DECADES 1900 to 1960

	Total Change		White Change		Non-white Change	
Decade	Number	Per Cent	Number	Per Cent	Number	Per Cent
1900-1910	255,311	19.7	234,876	19.1	20,435	31.9
1910-1920	274,771	17.7	223,631	15.3	51,140	60.6
1920-1930	127,182	7.0	40,277	2.4	86,905	64.1
1930-1940	– 19,627	– 1.0	– 49,880	– 2.9	30,253	13.2
1940-1950	140,271	7.3	14,060	0.8	126,211	49.2
1950-1960	– 69,093	– 3.3	– 225,158	– 13.3	156,065	41.2

Source: "Philadelphia's Non-white Population, 1960." *Report Number 1, Demographic Data.* Philadelphia Commission on Human Relations, Nov., 1961, Table 2.

of its white population had moved from another state between 1955 and 1960. The greatest migration, by far, was the influx of Negroes (3.6 per cent) from the South.

During this five-year period, the nonwhite population was vastly more mobile than the white. Negroes changed houses far more frequently, 45 per cent moving, compared to 28 per cent of whites moving. The whites, however, were far more mobile as far as intrastate movements were concerned. The mobility of the Negro probably is prompted largely by bad housing, a relatively low rate of home ownership, and dislocations at urban renewal sites.

The census data indicate that the nonwhite population is unevenly distributed throughout the city. As shown in Table 4, the greatest concentration of Negroes is in the north-central section of the city (38.7 per cent in 1960). Between 1950 and 1960, the number of nonwhite households increased absolutely in every section of the city except South Philadelphia. The Negro population grew most rapidly, relatively, in the north and west, south of Market sections of the city.

Age and Sex Composition

In 1960, the nonwhite population was more than eight years

TABLE 3

MIGRATION AND MOBILITY, BY RACE
PHILADELPHIA: 1955-1960

	White		Nonwhite	
	Number	Per Cent	Number	Per Cent
Population aged five and over, 1960	1,337,834	100.0	463,682	100.0
Lived in same house in 1960 as in 1955	851,502	63.6	210,940	45.5
Moved within city	376,033	28.1	208,963	45.1
Moved within state	29,129	2.2	3,681	0.8
Moved from other state:				
Northeast	22,086	1.7	4,435	1.0
North-Central	5,697	0.4	1,306	0.3
South	11,663	0.9	16,807	3.6
West	3,044	0.2	533	0.1
Live abroad in 1955*	14,301	1.1	1,644	0.4
Moved, no other information	24,379	1.8	15,373	3.3

*Includes territories.

Source: "Philadelphia's Non-white Population, 1960." *Report Number 3, Socioeconomic Data.* Philadelphia Commission on Human Relations, Dec., 1962, Table 11.

younger, on the average, than the white population; that is, the median age of nonwhites was 27.5 and that of whites, 35.9. Further, the median age in Philadelphia is increasing for whites and decreasing for Negroes. Among the nonwhite population, 38 per cent were under 18 years of age, while only 28 per cent of the white population were in that age bracket in 1960. Negroes made up 27 per cent of the population and 31 per cent of all persons under 40 years of age. These differences are related primarily to the exodus of young whites to the suburbs and the migration of young Negroes into Philadelphia. Second, the birth rate among Negroes is markedly higher.[5]

There were some important population changes during the 1950's. Between 1950 and 1960, the number of whites in all age groups except the 10-14 year-olds decreased. For example, during these years, in age group 25 to 44 there were 75,368 fewer white males and 85,340 fewer white females, decreases of 29.1 per cent and 30.9 per cent respectively.[6]

TABLE 4

DISTRIBUTION OF NONWHITE HOUSEHOLDS BY SECTION OF CITY OF PHILADELPHIA: 1940, 1950, 1960

	1940		1950		1960	
Section	Number	Per Cent	Number	Per Cent	Number	Per Cent*
South	1,944	29.7	23,528	23.4	22,831	15.3
North-Central	25,726	39.3	44,407	44.1	57,732	38.7
North	1,625	2.5	3,192	3.2	12,436	8.3
Kensington-Northeast	700	1.1	1,056	1.0	1,059	0.7
Germantown-Roxborough	2,445	3.7	2,991	3.0	7,823	5.2
West, North of Market	12,610	19.2	21,903	21.7	32,539	21.8
West, South of Market	2,942	4.5	3,608	3.6	14,680	9.8
Total	65,492	100.0	100,685	100.0	149,100	100.0

*Total of column deviates from 100.0 because of rounding.

Source: "Philadelphia's Non-white Population, 1960." *Report Number 3, Socioeconomic Data*. Philadelphia Commission on Human Relations, Dec., 1962, Table 5.

The existing and projected labor force in Philadelphia by race, sex, and age are presented in Tables 5 and 6. In 1960, about 64 per cent of the labor force were male; 74 per cent of the labor force were white. The forecasts made by John Culp, City Economist, indicate that by 1970 the labor force will be increasingly nonwhite (34 per cent) and female (40 per cent); the number of whites in age group 25-54 (both male and female) will continue to decline; the number of Negroes in age group 14-24 (both male and female) will double.

Education and Vocational Training

Education — The relative standing of the nonwhite population has improved with regard to the level of schooling, especially as indicated by the proportion who have graduated from high school. In 1960, the median number of school years completed by persons 25 years old and over was 9.8 for whites and 9.0 for nonwhites. These medians reflected a 0.5-year gain for whites and a 0.8-year gain for nonwhites over the preceding ten-year period.[7]

TABLE 5

EXISTING AND PROJECTED LABOR FORCE BY RACE, SEX, AND AGE – CITY OF PHILADELPHIA

Labor Force	1960	Projected 1965	Projected 1970
Male	539,803	548,251	551,908
14-24 Years	75,743	94,384	108,405
White	57,008	63,241	65,142
Nonwhite	18,735	31,143	43,263
25-54 Years	352,919	341,948	332,457
White	264,448	241,463	223,557
Nonwhite	88,471	100,485	108,900
55 Years and Over	111,141	111,919	111,046
White	92,110	90,815	88,514
Nonwhite	19,031	21,104	22,532
Female	310,952	346,137	362,562
14-24 Years	59,235	75,629	82,192
White	44,393	51,766	51,455
Nonwhite	14,842	23,863	30,737
25-54 Years	194,028	203,518	206,936
White	128,509	124,371	117,637
Nonwhite	65,519	79,147	89,299
55 Years and Over	57,689	66,990	73,434
White	45,364	50,985	54,792
Nonwhite	12,325	16,005	18,642
Total	850,755	894,388	914,478
White	631,832	622,641	601,097
Nonwhite	218,923	271,747	313,381

Source: *Overall Economic Development Program, City of Philadelphia.* Philadelphia Economic Development Committee, June 16, 1964, Table 1-II.

TABLE 6

PERCENTAGE DISTRIBUTION OF EXISTING AND PROJECTED LABOR FORCE BY RACE, SEX, AND AGE – CITY OF PHILADELPHIA

		Projected			Projected	
	1960	1965	1970	1960	1965	1970
Male	63.5	61.3	60.4			
14-24 Years	8.9	10.6	11.9	100.0	100.0	100.0
White	6.7	7.1	7.1	75.3	67.0	60.0
Nonwhite	2.2	3.5	4.7	24.7	33.0	40.0
25-54 Years	41.5	38.2	36.4	100.0	100.0	100.0
White	31.1	27.0	24.4	74.9	70.6	67.2
Nonwhite	10.4	11.2	12.0	25.1	29.4	32.8
55 Years and Over	13.1	12.5	12.1	100.0	100.0	100.0
White	10.8	10.2	9.7	82.9	81.1	79.7
Nonwhite	2.3	2.4	2.4	17.1	18.9	20.3
Female	36.6	38.7	39.6			
14-24 Years	7.0	8.5	9.0	100.0	100.0	100.0
White	5.2	5.8	5.6	74.9	68.4	62.6
Nonwhite	1.8	2.7	3.4	25.1	31.6	37.4
25-54 Years	22.8	22.8	22.6	100.0	100.0	100.0
White	15.1	13.9	12.9	66.2	61.1	56.8
Nonwhite	7.7	8.9	9.7	33.8	38.9	43.2
55 Years and Over	6.8	7.5	8.0	100.0	100.0	100.0
White	5.3	5.7	6.0	78.6	76.1	74.6
Nonwhite	1.5	1.8	2.0	21.4	23.9	25.4
Total	100.0	100.0	100.0			
White	74.3	69.6	65.7			
Nonwhite	25.6	30.4	34.3			

Source: *Overall Economic Development Program, City of Philadelphia.* Philadelphia Economic Development Committee, June 16, 1964, Table 2-II.

TABLE 7

SCHOOLING COMPLETED BY PERSONS AGED 25 AND OVER, BY RACE PHILADELPHIA: 1940, 1950, 1960

Amount of Education	White			Nonwhite*		
	1940	1950	1960	1940	1950	1960
Number finished college at least	42,361	56,105	54,144	1,740	4,180	7,943
Number finished high school at least	209,385	328,880	304,328	11,469	34,385	67,448
Number finished 7th grade at least	791,691	845,025	775,447	73,319	132,330	209,083
Total number**	1,022,970	1,044,400	925,778	143,866	209,360	285,719
Percentage finished college at least	4.1	5.4	5.8	1.2	2.0	2.8
Percentage finished high school at least	20.5	31.5	32.9	8.0	16.4	23.6
Percentage finished 7th grade at least	77.4	80.9	83.8	51.0	63.2	73.2

*1940 figures are for Negroes.

**Omitting cases not stated in 1940 and 1950.

Source: "Philadelphia's Non-white Population, 1960," *Report Number 3, op. cit.,* Table 7.

Schooling completed, rather than the rate of change for the cited age group, is indicated in Table 7. In 1960, 30.7 per cent of the Philadelphia population aged 25 and over completed high school, 32.9 per cent of the whites and 23.6 per cent of the nonwhites. For the same age group and period, 5.8 per cent of the whites and 2.8 per cent of the nonwhites completed college. Further, from 1940 to 1960, the number of Negroes graduating from high school tripled; the number of Negroes completing college doubled. It is worth noting that the discussion so far has not distinguished between public and private (including parochial) schools. In 1960, over one-half of the white students aged 5-34 attended private schools in Philadelphia, while less than 10 per cent of nonwhites attended private schools. A report issued by the Philadelphia Board of Public Education documents the rapid racial changes taking place within the school system. As indicated in Table 8, by 1964, 53 per cent of the public school population were nonwhite. Such trends are expected to continue until 1980.

The quality of public education in Philadelphia is too complex a matter to discuss in detail in this paper. However, a few observations with regard to the quality of education for Negroes are in order.

The recent Board of Education report cited above reveals that, as of June, 1964, about 25 per cent of Philadelphia's elementary school students were *at least* one year behind in reading and arithmetic for their grade level. Moreover, about 30 per cent of all tenth graders were similarly behind in reading proficiency. Among individual schools there was considerable variation on the performance tests given. Thus, of sixth graders in schools with 70 per cent or more Negro students, only 30 per cent attained the overall

TABLE 8

PERCENTAGE OF NEGRO PUPILS

School Level	1957	1958	1959	1960	1963	1964
Elementary	45	47	49	51	56	57
Junior High	39	41	42	45	54	56
Senior High	30	30	31	32	36	38
Technical High	34	37	40	43	46	49
Overall	41	43	45	47	52	53

Source: *Report of the Special Committee on Nondiscrimination.* Philadelphia Board of Public Education, July 23, 1964, p. 2.

sixth-grade median reading score as contrasted with 92 per cent in schools with 30 per cent or fewer Negro pupils. In a similar survey, only 25 per cent attained the median arithmetic score in the predominantly Negro schools, while 93 per cent did so in the predominantly white schools.[8]

As of May, 1963, 52.5 per cent of all public school students were Negro, while at the high school level, 33.3 per cent were Negro. According to the Board of Public Education's report, there were 14,621 Negroes in high school. Of these, 3,177 were enrolled in "high content courses," 4,209 in "commercial B and C courses," 1,765 in "modified courses," and 1,982 in "trade preparatory courses," the latter two being referred to as "low content courses."[9]

These data are only suggestive of the causes of the disheartening picture of public education, especially for the Negro. The board made a comparison of predominantly white and predominantly Negro schools and found that, generally speaking, Negro schools were more overcrowded, almost a third being at least 10 per cent above capacity; ran more part-time classes; had a larger median class size, 36.8 pupils; had a greater number of classes with enrollments above 40 pupils, almost one-fourth; and had relatively the smallest number of classes with fewer than 30 pupils, roughly one-tenth.[10] Further, it is common knowledge that the predominantly Negro schools are older, have more teacher vacancies and fewer experienced teachers, and utilize a greater proportion of permanent "substitute" teachers. There are approximately 1,000 substitute teachers out of a total of about 9,000 teachers in the Philadelphia public school system.

In a recent National Education Association study it was reported that Philadelphia has the worst school dropout problem of any big city in the country. In fact, among 128 large and medium-sized school districts, Philadelphia ranked 127th in its ability to retain youngsters in the classroom! In 1963, only 53.4 per cent of the 1960 tenth graders graduated from high school. This compares to a 70.8 per cent completion rate for big city districts nationally.[11]

Vocational education. – Data on vocational training of Negroes in Philadelphia are scarce. We have seen that 49 per cent of technical high school students are Negroes, a 15 per cent increase from 1957 to 1964 (see Table 8). Out of a total of 8,668 Negro junior high school pupils (ninth graders), as of May, 1963, 6,914 or nearly 80 per cent were enrolled in a non-academic, i.e., job-oriented, program. Only 1,754 Negroes were enrolled in the academic program (college preparatory); the greatest number of Negroes in senior high schools were enrolled in commercial B and C, general, modified, and trade preparatory courses.[12]

For some years Pennsylvania has maintained a retraining program for the unemployed financed by state funds. Data are not kept to indicate the nature and degree of Negro participation in this program. However, the general impression obtained from local officials is that many of the participants, perhaps even a majority, are Negroes. In Philadelphia last year, 596 persons were enrolled for courses in five occupation categories. The majority of these trainees received instruction as practical nurses, sewing machine operators, and food supervisors, in that order. In the previous year, about 1,500 Philadelphians had been trained and placed by this state program.[13]

The problem of persistent unemployment prompted the federal government to enact the Manpower Development and Training Act (MDTA) in 1962. Its aim is to provide training and retraining for the unemployed. From 1962 through June, 1964, 41 course sections were completed in Philadelphia. It has been estimated that 80 to 90 per cent of the trainees were Negro. Some 480 persons completed training (51 per cent of those who had enrolled), while 320 trainees were placed on a job (34 per cent of those who had enrolled and 67 per cent of those who had completed training). Moreover, during this period, roughly 1,500 persons have undergone some degree of pre-vocational and semi-vocational training under a special MDTA project for the hard-core unemployed.[14]

Industrial and Occupational Patterns

Industrial patterns – The causes of the slackening demand for labor in Philadelphia in the face of increasing supply are vast and complex. The continuing decline in job opportunities confronts the Negro worker with additional difficulties in his attempts to achieve equal employment opportunity in all vocational fields.

Significant changes in the underlying structure of industry in Philadelphia explain the current and future structure of demand for manpower. The Office of the Development Coordinator in Philadelphia, using Pennsylvania Bureau of Employment security statistics, found that for the period 1952 to 1962 manufacturing employment declined by 63,300 (17.8 per cent), about equally, on a percentage basis, for durable and non-durable goods; and non-manufacturing employment fell by 89,200 (8.1 per cent). In manufacturing, the only increases in employment were to be found in the electrical machinery, printing and publishing, rubber and miscellaneous plastics, and chemicals and allied products industries. The major increased demand among non-manufacturing firms was in service and miscellaneous, finance, insurance, and real estate industries.[15]

The implications of these industrial trends are significant for the Philadelphia labor force and the Negro worker in particular. In 1960, the labor force was predominantly blue collar. About 43 per cent of the resident labor force were in semi-skilled or skilled occupations. Also about 44 per cent of the labor force were in white collar occupations. However, 80 per cent of Negro males were in blue collar occupations, nearly 20 per cent as laborers.[16]

There were significant differences among industry groups as far as employment of nonwhites was concerned. Census data reveal that 37 per cent of whites and 29 per cent of nonwhites worked in manufacturing in 1960; the differential was explained primarily by the fact that relatively fewer Negroes were employed in the durable goods sub-group. More whites (21 per cent) than Negroes (16 per cent) were employed in wholesale or retail trade. Similarly, 6 per cent of whites and 2 per cent of nonwhites worked in finance, insurance, and real estate. In contrast, more nonwhites held jobs in personal services — 17 per cent to 3 per cent, slightly more in public administration — 8 per cent to 6 per cent; and in construction the relevant ratio was 6 per cent as against 4 per cent. The proportions in professional and related groups were roughly comparable at about 11 per cent; the high Negro rate is explained by the inclusion of jobs in hospital and educational services under this industrial classification.[17] A more complete breakdown of occupations filled by Negroes follows.

Occupational patterns — Negro males, as indicated in Table 9, have made substantial progress in upgrading their skills relative to whites in Philadelphia. A comparison based upon census data for 1940 and 1960 reveals that Negro males held relatively more jobs as professional and technical personnel, as clerks and salesmen, as craftsmen, and as operatives. On the other hand, relatively fewer Negro men were employed as managers or officials, as domestic servants or in other services, or as laborers. In 1940, 5.9 per cent of all white workers were classified as laborers, compared to twice as many Negroes, or 29.7 per cent of the total Negro labor force. By 1960, while 4.2 per cent of the white labor force were classified as laborers, 18.9 per cent of the Negro labor force were laborers. This was an extremely significant decline in the largest occupation differential, i.e., laborers, between whites and nonwhites, but still a disconcerting fact of life for nearly 20 per cent of the Negro male labor force. Another sharp contrast is revealed in the 1960 breakdown of male occupations by race: 43 per cent of white males worked in white collar jobs as compared to 19 per cent of nonwhite males.

Projections of the future composition of the Philadelphia labor

TABLE 9

OCCUPATION OF EMPLOYED MALES BY RACE PHILADELPHIA: 1940, 1960

	White				Non-white			
	1940		1960		1940		1960	
Occupation	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Professional, Technical, and Kindred	29,211	6.7	41,140	11.2	1,205	2.8	3,908	3.9
Managers, Officials, Proprietors	49,602	11.3	38,036	10.4	1,361	3.2	2,527	2.5
Clerical and Sales	90,126	20.6	76,482	20.9	2,845	6.6	12,799	12.9
Craftsmen, Foremen	95,297	21.7	82,439	22.5	3,705	8.6	13,886	13.9
Operatives	108,906	24.8	84,096	22.9	8,972	20.8	30,348	30.4
Private Households	517	0.1	168	0.05	1,414	3.3	594	0.6
Other Service	38,025	8.7	28,187	7.7	10,737	24.9	16,544	16.6
Farmers and Farm Workers	711	0.2	378	0.1	50	0.1	224	0.2
Laborers	28,892	5.9	15,533	4.2	12,806	29.7	18,861	18.9
Total	438,287	100.0	366,459	100.0	43,095	100.0	99,961	100.0
Not Stated	3,380		20,236		324		11,631	
Grand Total	441,667		386,695		43,419		111,322	

Source: U. S. Bureau of the Census, *U. S. Census of Population, 1960, General Social and Economic Characteristics, Pennsylvania,* Final Report, PC (1)-40C, 1962, p. 431.

force are highlighted by changes which are of utmost importance to the Negro worker. The net demand for new jobs (including employer replacement needs) is expected to increase by 72.9 per cent for white collar workers and by 27.1 per cent for blue collar workers between 1960 and 1970. The greatest relative increase in net demand, by far, is to be for clerical and kindred workers (38.6 per cent); also, relatively strong increases are forecast in the net demand for service workers, excluding private household domestics (11.4 per cent), and operatives (10.1 per cent). An actual net decline in the demand for laborers (—2.6 per cent) is expected.[18]

Interesting statistics are available on the employment of Negro teachers in the Philadelphia public school system. Marked strides have been made in integrating school staffs since 1957. As of June, 1964, about 30 per cent of the teaching staff were Negro. By then, also, professional personnel in two-thirds of the elementary schools, in all but two junior high schools, and in all high schools were integrated. However, 7 of 131 elementary schools still had an entirely Negro teaching staff, while 68 elementary schools and 2 junior high schools had an entirely white teaching staff.[19]

As of 1963, the employment pattern for Negroes in administrative and supervisory positions in the Philadelphia schools was as follows: nineteen Negro elementary school principals had qualified by examination for the position, all of them supervising predominantly Negro-populated and staffed schools; one Negro high school principal had been appointed, supervising a predominantly Negro-populated school, with a well-integrated teaching staff; and there was one Negro district superintendent in an area where the student population was predominantly Negro.[20]

Several new provisional appointments of Negroes to administrative and supervisory positions were made: two new district superintendents, one assistant to an associate superintendent, and one principal on special appointment. Also, several Negroes were given permanent appointments: one assistant division head, one psychologist, four supervisors, one junior high school vice-principal, and one senior high school vice-principal. Finally, nine Negroes were appointed as elementary school principals.[21]

Individual and Family Income

The Negro worker in Philadelphia is disproportionately represented in the lowest and least desirable occupational categories, namely, laborers (53 per cent of the total) and domestic servants (86 per cent of the total). It is, then, not surprising to find that the median income of Negroes is considerably lower than that of whites who, on the whole, hold better jobs.

TABLE 10

INCOME OF INDIVIDUALS,* BY RACE PHILADELPHIA: 1949 AND 1959

	White				Nonwhite			
	1949		1959		1949		1959	
Income	Number	Cum. Percentage	Number	Cum. Percentage	Number	Cum. Percentage	Number	Cum. Percentage
Under $1000	133,925	17.4	158,375	19.5	48,995	30.4	61,597	23.3
1000 – 1999	157,690	37.9	106,501	32.5	53,060	63.4	51,263	42.8
2000 – 2999	205,955	64.6	101,888	45.1	43,265	90.3	50,295	61.8
3000 – 3999	154,860	84.8	110,638	58.7	12,500	98.0	42,913	78.1
4000 – 4999	56,500	92.1	108,169	72.0	1,865	99.2	32,119	90.2
5000 – 5999	28,465	95.8	92,216	83.3	605	99.6	16,100	96.3
6000 – plus	32,260	100.0	136,020	100.0	700	100.0	9,664	100.0
Total	769,655		813,807		160,990		263,951	
Median income	$2,453**		$3,363		$1,594		$2,380**	

*Persons with income, aged 14 and over.

**Recalculated for above distribution: differs slightly from published census figure.

Source: "Philadelphia's Non-white Population, 1960." *Report Number 3, op. cit.,* Table 2.

Individual income – In 1949, the median income for nonwhites in Philadelphia was 65 per cent of the median income for whites; but in 1939, it was about 38 per cent of the average annual income of whites! By 1959, the median income of Negroes had risen to 71 per cent of that of whites in Philadelphia. However, since the relative median income of whites and nonwhites in suburban Philadelphia remained nearly constant, much of the relative improvement in median income of Negroes in Philadelphia may be attributed to the migration to the suburbs of many whites with high incomes.[22]

The individual white's median income in 1959 was $3,363 and the nonwhite's, $2,380, as indicated in Table 10. Further, in 1959 about 45 per cent of whites and 62 per cent of nonwhites earned *less* than $3,000 per year; about 17 per cent of whites and 4 per cent of nonwhites earned *more* than $6,000 per year.

Family income – Statistics on family income by race are shown in Table 11. It is found that in 1959, the white family's median income was $6,269, and the nonwhite family's median income was $4,248 (68 per cent of the white median family income). About 13 per cent of white families and nearly 31 per cent of nonwhite families had incomes lower than $3,000; about 53 per cent of white families and nearly 27 per cent of nonwhite families had incomes over $6,000. Setting the standard for "poverty" at a family income below $3,000 and for "middle class" at a family income of over $6,000, nearly one-third of all Negro families in Philadelphia were living in poverty in 1959, and over one-fourth were in the middle class or higher.

A more accurate picture of the Negro family's relative income standing may be reflected in the following comparison. The median family income for the Standard Metropolitan Statistical Area (or the eight-county area) in 1959 was $6,433. Among Negro families, 77 per cent fall below this median level compared to 52 per cent of white families.[23]

Unemployment and Underemployment

During the years 1957 through 1962, 76,000 to 107,000 of Philadelphia's workers were unemployed. This represented an unemployment rate of from about 9 to 12 per cent of the resident labor force. Moreover, many workers were underemployed (worked between 14 and 39 weeks per year). In 1959, of all male workers over 14 in the Philadelphia labor force, 13 per cent were underemployed. Among this number those particularly hard hit were the nonwhite and young workers. Hence Negroes, who constituted 26 per cent of

TABLE 11

FAMILY INCOME, BY RACE, PHILADELPHIA: 1959

Income	White			Nonwhite		
	Number	Per Cent	Cum. Percentage	Number	Per Cent	Cum. Percentage
Under $1000	11,257	3.0	3.0	9,085	7.6	7.6
1000 – 1999	16,599	4.4	7.3	12,624	10.6	18.3
2000 – 2999	21,133	5.5	12.8	14,981	12.6	30.8
3000 – 3999	29,475	7.7	20.6	18,302	15.4	46.2
4000 – 4999	44,405	11.6	32.2	18,054	15.2	61.4
5000 – 5999	55,074	14.4	46.6	14,402	12.1	73.5
6000 – 6999	47,729	12.5	59.1	9,987	8.4	81.9
7000 – 7999	38,684	10.1	69.3	6,995	5.9	87.8
8000 – 8999	30,500	8.0	77.3	4,915	4.1	91.9
9000 – 9999	21,741	5.7	83.0	3,389	2.8	94.8
10,000 plus	64,987	17.0	100.0	6,197	5.2	100.0
Total	381,584	100.0		118,931	100.0	
Median family income		$6,269			$4,248	

Source: "Philadelphia's Non-white Population, 1960." *Report Number 3, op. cit.,* Table 3.

the labor force, accounted for 43 per cent of all unemployed in the city.[24]

Nonwhite unemployment has been much higher, in general, in Philadelphia. Census data indicate that in 1960 the total white unemployment rate was 5 per cent while the total nonwhite unemployment rate was 10.7 per cent. Among whites the unemployment rates for males and females are about equal. However, among Negroes the unemployment rate is significantly higher for males (11.1 per cent) than for females (10.2 per cent).[25]

The precise degree of unemployment among nonwhite youths in Philadelphia is not known. Data provided in a recent newspaper article, however, are indicative of the problem's sinister dimensions. Among Negro youths (between 14 and 19 years of age) in the labor force, 25 per cent are unemployed. This rate is twice as high as that for white youths. These percentages undoubtedly understate the rates of unemployment, since many youths out of school may not be actively seeking employment.[26]

Actually very little information is available on the characteristics of the Negro unemployed. For that reason, Table 12 is included here; it provides some data relevant to the discourse. The characteristics of MDTA trainees at the national, state, and city levels are detailed. Local administrators of the MDTA programs estimate that about 80 per cent of the unemployed trainees in Philadelphia are Negro and that, in specific courses, up to 90 per cent of the trainees are Negro.

It is particularly interesting to note that 55 per cent of the trainees referred for selected institutional training courses in Philadelphia had completed high school, and about 9 per cent had more than 12 years of schooling. Moreover, most of the people of this sample (about 70 per cent) were 22 to 44 years of age. Finally, nearly 68 per cent were among the long-term unemployed.

Labor Union Membership

Philadelphia has in its labor force 200,000 union members, of whom 25,000 are Negroes. While 12 per cent of all Philadelphia union members are nonwhite, 75 per cent of these Negroes are in industrial (old CIO) unions. Many Negro union members work in the construction industry, but not at the highly skilled jobs controlled by the AFL craft unions. It is estimated that the number of Negro laborers has increased by 50 per cent; yet, there is only token Negro membership in the twenty-odd building trade union locals in Philadelphia, except for the Hod Carriers and Common Laborers Union.[27]

In May, 1963, six building trade unions were cited by the Philadelphia Commission on Human Relations for discriminating against Negroes. The Plumbers, Steamfitters, Sheet Metal Workers, Composition Roofers, and Electricians locals were ordered to admit qualified nonwhites to membership, to administer objective admission tests, and to refer qualified nonwhites on a non-discriminatory basis in the two instances wherein exclusive hiring halls are permitted to exist.[28]

SUMMARY AND CONCLUSIONS

That the labor market is not perfect but "structured" is axiomatic. The meaningful question, then, is whether existing differential patterns of employment, occupation, and income for whites and non-whites are explainable solely by the factor of race. If so, the data, although not conclusive, at least indicate that the Negro worker in Philadelphia suffers from past and present systematic employment discrimination.

TABLE 12
CHARACTERISTICS OF MDTA TRAINEES

Characteristic		Enrolled in All MDTA Courses: National[1], Fiscal 1964[2]	Enrolled in All MDTA Courses: National[1], Fiscal 1963	Enrolled in All MDTA Courses: Penna.[3]	
		Per Cent		Number	Per Cent
	Total			8041	
Sex	Male	56.5	63.5	6449	80.2
	Female	43.4	36.5	1592	19.8
Color	White	75.2	76.7	—	—
	Nonwhite	24.8	23.3	—	—
Age	Under 19	11.8	5.1	506	6.3
	19-21	23.1	19.1	1485	18.4
	22-44	54.6	64.9	5236	65.1
	45 and over	10.5	11.0	814	10.1
Educational Attainment	Less than 8th	2.1	3.1	359	4.5
	8th	5.6	7.6	725	9.0
	9th – 11th	27.9	30.1	3142	39.0
	12th	53.7	50.2	3550	44.1
	Over 12th	10.7	9.0	265	3.3
Duration of Unemploy.	Short-term Unemployed	54.7	50.7	3135	39.0
	Less than 5 wks.	30.6	24.3	1413	17.6
	5 - 14 wks.	24.1	26.4	1722	21.4
	Long-term Unemployed	45.2	49.3	4906	61.0
	15 - 26 wks.	12.3	17.4	1169	14.5
	27 - 52 wks.	12.5	12.9	1236	15.4
	Over 52 wks.	20.4	19.0	2501	31.1
Eligible for Reg. Allow.	Men	61.0	75.0	—	—
	Women	31.8	35.7	—	—
Head of Family	Men	61.7	75.9	4973	61.8
	Women	33.1	37.9	556	6.9

Source: [1]"Changing Characteristics of MDTA Trainees, Fiscal Year 1963-64." *Manpower Program Evaluation Report Number 6,* United States Department of Labor, Office of Manpower, Automation, and Training, Feb., 1964, pp. 2-6.

[2]The data are based on an analysis of the first five months of fiscal 1964.

[3]*Cumulative Summary of All MDTA Courses Through June 1964,* Pennsylvania Department of Labor and Industry, Bureau of Employment Security, July 20, 1964, p. 1.

TABLE 12 (continued)
CHARACTERISTICS OF MDTA TRAINEES

Characteristic		Referred to Institutional MDTA Courses, Philadelphia[4]			
		Mech. Drafts.		Stenog.	
		Number	Per Cent	Number	Per Cent
	Total	57		57	
Sex	Male	55	96.5	5	8.8
	Female	2	3.5	52	91.2
Color	White	—	—	—	—
	Nonwhite	—	—	—	—
Age	Under 19	1	1.8	7	12.3
	19-21	7	12.3	5	8.8
	22-44	44	77.2	36	63.2
	45 and over	5	8.8	9	15.8
Educational Attainment	Less than 8th	—	—	—	—
	8th	—	—	—	—
	9th – 11th	9	15.8	7	12.3
	12th	36	63.2	47	82.5
	Over 12th	12	21.0	3	5.3
Duration of Unemploy.	Short-term Unemployed	10	17.5	20	35.1
	Less than 5 wks.	—	—	8	14.0
	5 - 14 wks.	10	17.5	12	21.1
	Long-term Unemployed	47	82.5	37	64.9
	15 - 26 wks.	18	31.6	10	17.5
	27 - 52 wks.	16	28.1	10	17.5
	Over 52 wks.	13	22.8	17	29.8
Eligible for Reg. Allow.	Men	33	100.0	3	5.3
	Women	—	—	20	35.1
Head of Family	Men	38	100.0	3	5.3
	Women	—	—	21	36.8

[4] The data were obtained from internal administrative reports of the Commonwealth of Pennsylvania, Department of Labor and Industry, Bureau of Employment Security. The courses selected represented the five most heavily enrolled job classifications in each occupational group, e.g., professional and managerial, clerical and sales, service, skilled, and semi-skilled. Selection of the particular course section was random. Courses were started as early as Feb., 1962, and some were concluded in Feb., 1964.

TABLE 12 (continued)
CHARACTERISTICS OF MDTA TRAINEES

Characteristic		Referred to Institutional MDTA Courses, Philadelphia[4]			
		Waitress		Welder	
		Number	Per Cent	Number	Per Cent
	Total	9		33	
Sex	Male	3	33.3	33	100.0
	Female	6	66.6	—	—
Color	White	—	—	—	—
	Nonwhite	—	—	—	—
Age	Under 19	—	—	—	—
	19-21	—	—	—	—
	22-44	8	89.9	24	72.7
	45 and over	1	11.1	9	27.3
Educational Attainment	Less than 8th	—	—	3	9.1
	8th	—	—	4	12.1
	9th – 11th	4	4.4	20	60.6
	12th	5	55.6	5	15.2
	Over 12th	—	—	1	3.0
Duration of Unemploy.	Short-term Unemployed	3	33.3	13	39.4
	Less than 5 wks.	—	—	3	9.1
	5 - 14 wks.	3	33.3	10	30.3
	Long-term Unemployed	6	66.6	20	60.6
	15 - 26 wks.	—	—	2	6.1
	27 - 52 wks.	2	22.2	9	27.3
	Over 52 wks.	4	44.4	9	27.3
Eligible for Reg. Allow.	Men	1	11.1	31	100.0
	Women	3	33.3	—	—
Head of Family	Men	1	11.1	33	100.0
	Women	3	33.3	—	—

[4] The data were obtained from internal administrative reports of the Commonwealth of Pennsylvania, Department of Labor and Industry, Bureau of Employment Security. The courses selected represented the five most heavily enrolled job classifications in each occupational group, e.g., professional and managerial, clerical and sales, service, skilled, and semi-skilled. Selection of the particular course section was random. Courses were started as early as Feb., 1962, and some were concluded in Feb., 1964.

TABLE 12 (continued)
CHARACTERISTICS OF MDTA TRAINEES

Characteristic		Referred to Institutional MDTA Courses, Philadelphia[4]			
		Auto Ser. Sta. Mech.		Total	
		Number	Per Cent	Number	Per Cent
	Total	29		185	
Sex	Male	29	100.0	125	67.6
	Female	—	—	60	32.4
Color	White	—	—	—	—
	Nonwhite	—	—	—	—
Age	Under 19	1	3.4	9	4.9
	19-21	7	24.1	19	10.3
	22-44	17	58.6	129	69.7
	45 and over	4	13.8	28	15.1
Educational Attainment	Less than 8th	1	3.4	4	2.2
	8th	—	—	4	2.2
	9th – 11th	18	62.1	58	31.4
	12th	9	31.0	102	55.1
	Over 12th	1	3.4	17	9.2
Duration of Unemploy.	Short-term Unemployed	14	48.3	60	32.4
	Less than 5 wks.	9	31.0	20	10.8
	5 - 14 wks.	5	17.2	40	21.6
	Long-term Unemployed	15	51.7	125	67.6
	15 - 26 wks.	3	10.3	33	17.8
	27 - 52 wks.	3	10.3	40	21.6
	Over 52 wks.	9	31.0	52	28.1
Eligible for Reg. Allow.	Men	19	100.0	87	47.0
	Women	—	—	23	12.4
Head of Family	Men	19	100.0	104	56.2
	Women	—	—	24	13.0

[4] The data were obtained from internal administrative reports of the Commonwealth of Pennsylvania, Department of Labor and Industry, Bureau of Employment Security. The courses selected represented the five most heavily enrolled job classifications in each occupational group, e.g., professional and managerial, clerical and sales, service, skilled, and semi-skilled. Selection of the particular course section was random. Courses were started as early as Feb., 1962, and some were concluded in Feb., 1964.

The population of Philadelphia is becoming increasingly nonwhite. During the previous decade there was a net decrease in the white population and a sizable increase in the nonwhite population. The forecasts are that these trends will continue. Further, the total labor force of Philadelphia also decreased during the 1950's, but currently is increasing and is becoming increasingly nonwhite. It is forecast that by 1970, 34 per cent of all workers in Philadelphia will be nonwhite.

The Negro worker in Philadelphia is far more migratory and mobile than the white worker. The migration rate for Negroes into Philadelphia, especially from the South, is higher than that for whites. The Negro also is far more mobile within the city limits than is the white. Whites are far more mobile in intra-state moves, e.g., the exodus to the suburbs. The fact that the Negro population is highly concentrated within specific neighborhoods is significant for obvious social and political reasons. The fact that nonwhites, especially youths, define the area of movement within the city to "safe" neighborhoods results in a labor market segmentation as yet unexplored.

The labor force in Philadelphia is becoming younger and increasingly female. The number of whites in the 25 to 44 age group has decreased. The nonwhite worker in Philadelphia is eight years younger, on the average, than the white worker.

The Negro has made impressive strides in improving his relative degree of educational attainment in Philadelphia. During the decade of the 1950's the rate of Negro high-school completions tripled, and the rate [illegible]gro college completions doubled. However, the quality of education in the public school system in Philadelphia mitigates, to a degree, the significance of these achievements. Many courses of instruction are so woefully thin in content that high school graduates cannot meet even minimum job specifications. The problem is particularly acute for Negroes, since their schools are generally inferior in every important respect.

Almost no data are available on the various programs to provide vocational training in Philadelphia. These programs, sponsored by all governmental levels, are under scrutiny, and officials loathe to discuss them. However, all sources apparently agree that the programs leave much to be desired. The technical high schools, state vocational education programs for the unemployed, and the MDTA efforts in Philadelphia are not noteworthy for success. These facts are particularly significant for the Negro worker, since he is more likely to seek vocational training as a youth or unemployed adult whose employability is severely limited.

Changes in the structure of demand for labor in Philadelphia hit the Negro worker especially hard. The city has experienced a general decline in manufacturing and non-manufacturing employment. Among Negro male workers, 80 per cent are in blue collar jobs and 20 per cent of these are laborers. The majority of Negro workers are employed in non-durable manufacturing, personal services, public administration, and construction.

The Negro male worker in Philadelphia has upgraded his work skills substantially, relative to whites, as reflected by a large decline in the differential of white and nonwhite laborers. Yet Negro white collar workers still are relatively few in number. As demand declines in blue collar occupations currently filled by Negroes and demand increases in occupations traditionally barred to them, an occupational shift of heroic proportions must take place.

The Negro's industrial occupational pattern is reflected in his level of remuneration. The Negro seems to have made vast strides in narrowing down median individual and family incomes relative to whites within the recent past. However, demographic changes, such as the outmigration of relatively high income whites to the suburbs, tend to distort the degree of Negro progress. Therefore, while the Negro male's median income was 71 per cent of the white male's, a substantial gain, more meaningful are the facts that almost two-thirds of all Negro males earned less than $3,000 and only 4 per cent earned more than $6,000 annually in 1960, well below percentages for whites.

Recently compiled statistics show that Negro workers comprise 26 per cent of the work force and 43 per cent of the unemployed. The unemployment rate for Negroes has run at the rate of about twice that of whites; the rate has been higher for Negro males than for Negro females. In addition, 13 per cent of all workers in Philadelphia have been classified as underemployed. Young workers, especially Negroes, are the hardest hit as regards unemployment and underemployment. Statistics on characteristics of unemployed workers referred to institutional MDTA courses reveal that 80 to 90 per cent were Negro.

Finally, the Negro has been excluded from membership in certain unions and thus has been precluded from employment in certain occupations. Most Negroes are in industrial, e.g., non-craft, unions; only a token number of Negroes have been admitted to certain skilled trades.

The conclusion derived from these data is that the Negro worker in Philadelphia does not enjoy equality of economic opportunity in the labor market. The labor market characteristics and operations discussed in this paper document the degree to which major cultural and institutional barriers have operated to the detriment of the

Negro worker. The results of this discrimination, based upon race, have been reflected in differential employment and income patterns. As this study demonstrates, guideposts for public and private nondiscriminatory employment programs must be rooted in the labor market realities faced by Negro workers to be meaningful.

FOOTNOTES

1. *Philadelphia's Position in the Regional and National Economy.* Prepared by National Analysts, Inc., for the city of Philadelphia, Renewal Program, May, 1964. The basic aim of the study was to develop gross product data, that is, measurements of the value of the goods and services produced within a given geographic area. In the determination of the components of local gross product for 1947 to 1962, called "Basic Private Demand," both federal and local government spending have been omitted.
2. Nonwhites included other than Negroes were Indians, Japanese, Chinese, and Filipinos. Collectively these "other races" constituted 1 per cent of the nonwhite population of Philadelphia. "Philadelphia's Non-white Population, 1960," *Report Number 1, Demographic Data.* (Philadelphia: Commission on Human Relations, Nov., 1961), p. 3. In the text "Negro" and "nonwhite" are used interchangeably.
3. The Philadelphia labor market is defined by the Pennsylvania Bureau of Employment Security as consisting of eight counties, three of which are in New Jersey. This eight-county area, e.g., Philadelphia labor market, is also termed the Standard Metropolitan Statistical Area (SMSA). One of the five counties in the Pennsylvania portion of the labor market is Philadelphia County, which is equivalent to the city of Philadelphia.
4. *Overall Economic Development Program, City of Philadelphia.* (Philadelphia: Economic Development Committee, June 16, 1964). The committee, formed by the Mayor in December, 1963, is made up of thirty members representing public administrators and business, labor, education, religious, and citizen groups. John L. Culp, City Economist, was in charge of preparing this fine report.
5. "Philadelphia's Non-white Population, 1960," *Report Number 3, Socioeconomic Data.* (Philadelphia: Commission on Human Relations, Dec., 1962), p. 3.
6. "General Population Characteristics and Trends, Philadelphia and Environs," *Public Information Bulletin 8-A.* (Philadelphia: City Planning Commission, Apr., 1963), Table 3.
7. "General Socio-Economic Characteristics and Trends, Philadelphia and Environs," *Public Information Bulletin 8-C.* (Philadelphia: City Planning Commission, Apr., 1963), Tables 9 and 10.
8. *Report of the Special Committee on Nondiscrimination* (Philadelphia: Board of Public Education, July 23, 1964), pp. 16-18.
9. *Ibid.*, pp. 12-14.
10. *Ibid.*, p. 11.
11. These data, prepared by Daniel Schreiber, Director of the National Education Association, were reported on in "Philadelphia Leads Big Cities in Number of Dropouts," *The Evening Bulletin,* 118: No. 105, pp. 1, 6 (July 25, 1964).
12. *Report of the Special Committee on Nondiscrimination, op. cit.*, pp. 13-14.

13. *Overall Economic Development Program, City of Philadelphia, op. cit.,* p. 84.
14. The data on the MDTA program in Philadelphia are from the author's forthcoming study, "Urban Manpower and the MDTA: The Philadelphia Story."
15. *Overall Economic Development Program, City of Philadelphia, op. cit.,* Table 2-I.
16. *Ibid.,* p. 36.
17. "Philadelphia's Non-white Population, 1960," *Report Number 3, op. cit.,* Table 6.
18. *Overall Economic Development Program, City of Philadelphia, op. cit.,* Table 9-II.
19. *Report of the Special Committee on Nondiscrimination, op. cit.,* pp. 3-4.
20. *Ibid.,* p. 160.
21. *Ibid.,* p. 164.
22. "Philadelphia's Non-white Population, 1960," *Report Number 3, op. cit.,* p. 4.
23. "General Socio-Economic Characteristics and Trends," *op. cit.,* discussion of Table 5.
24. *Overall Economic Development Program, City of Philadelphia, op. cit.,* Tables 5-II and 6-II, and p. 43.
25. "Philadelphia's Non-white Population, 1960," *Report Number 3, op. cit.,* Table 4.
26. "Joblessness Rate of Negro Youths Increases to 25 per cent," *New York Times,* cxiii: No. 38, 928, p. 1 (Aug. 23, 1964).
27. "Jim Crow's Sweetheart Contract," *Greater Philadelphia Magazine,* 54: No. 2, p. 29 (Feb., 1963).
28. *City Contract Compliance: Progress in 1963.* (Philadelphia: Commission on Human Relations, Apr., 1964), pp. 1-2.

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THE UNIVERSITY OF PENNSYLVANIA PILOT RESIDENTIAL EDUCATIONAL-VOCATIONAL PROJECT

Howard E. Mitchell*

With a degree of urgency in our country, we are moving toward integration rather than separation and differentiation. One aspect of this movement is reflected in our concern for a large segment of the population which cannot contribute effectively or has been impaired by "cultural disadvantage" or lack of opportunity. There is a pressing need to salvage what is good and what can make a contribution to the common good. However, we need devices and a sharp look at the processes whereby we assure greater opportunities for realizing the maximum potential for the pursuit of happiness and individual growth in every citizen. This paper presents the experimental role played and contribution made by a large urban university toward this goal. The administrative mechanism which made the program possible is discussed, followed by an over-view of the project and initial findings. Most important, focus is made upon lessons learned concerning the latent talent and leadership in the "culturally disadvantaged" youth group. This aspect of our experience is discussed in terms of the importance of making effective use of latent potential in equal opportunity program participants. The hypothesis is offered that equal opportunity programs developed and implemented by the formal public and private institutions and agencies of our society will more effectively serve the participating population, if that population is permitted to have a responsible role in policy and decision making concerning development and direction of the program.

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THE HUMAN RESOURCES PROGRAM OF THE UNIVERSITY OF PENNSYLVANIA

"Historically, a university met society's need for the fruits of learning at arm's length, through the individuals it educated and the knowledge it put on record. Today, the American university has itself become an instrument of national purpose,"[1] stated President Gaylord P. Harnwell of the University of Pennsylvania in early 1964. Such a philosophy dictates a sensitive interaction between the university and the surrounding society and culture. In keeping with this orientation, the Human Resources Program was established at the University of Pennsylvania by President Harnwell in April, 1964, as a mechanism through which student, faculty, and administrative efforts might be coordinated in the areas of education and human and industrial relations relating to social change and equal opportunity. A staff was organized responsible to the Office of the President, assisted in its policy-making by an advisory committee comprised of key faculty in education, the social sciences, law, social work, and labor and industry departments of the university.

Shortly after the establishment of the Human Resources Program its director met with members of the President's War on Poverty Task Force to explore the role of the urban university in the pending Economic Opportunity Act of 1964. Resulting from these conversations was the decision that the Human Resources Program staff would develop a proposal for submission to the Office of Economic Opportunity to operate one of the proposed Job Corps Training Centers provided for in the then pending legislation.

As the Human Resources Program staff and its advisory committee began to consider the scope of initial issues to be faced in conducting such a residential educational project, critical guide lines were needed. Search of the literature and talk with experienced personnel yielded limited opinion and few facts concerning how best to recruit out-of-school youth, effective assessment methods and their limitations, modifications necessary in traditional motivational systems and educational methods, and the anticipated problems and their handling by the resident counselor-teacher (the latter being typically of a middle-class culture and value orientation and many encountering low-income youth for the first time in an intensive living situation). Therefore a project was designed to operate a six-week pilot residential educational-vocational program,[2] including a follow-up study of its participants, in order to establish guide-lines for the larger proposed operation.

THE PILOT PROGRAM

On funds granted from the United States Office of Education, one hundred high school male dropouts spent six weeks at the University of Pennsylvania in the summer of 1964. They lived and studied in the men's dormitories and worked on vocational skill-producing projects on and off campus. Their teachers and counselors were university faculty members and college students from Pennsylvania and other institutions who lived, ate, worked, and studied with their charges, accompanying them throughout their daily activities.

The enrollees were recruited from public and private social agencies, school personnel, court officials, and neighborhood block groups. Requirements for participation dictated that these young men be 16 to 21 years of age, out-of-school, educationally and culturally deficient by the middle class standards of our society, and free of any infection, communicable disease, or addictive state. The latter requirements were established through a medical processing provided by the diagnostic clinic of the Hospital of the University of Pennsylvania.[3] Another requirement was that the participants be representative of both Negro and white youth as well as urban versus rural populations.

The original one hundred invited to participate in the six-week program were told we had no illusions concerning teaching them employable job skills in so brief a period. We offered a five-day-a-week opportunity to receive remedial instruction in reading, mathematics, and communication skills in the morning. Following expression of their vocational interests and assessment of their vocational aptitudes and interests, they would be assigned to work programs on and off the campus in the afternoons. Some would work in the university planning and printing offices, dining service, book store, building and grounds, and engineering service. Approximately 60 per cent would work on community-based construction trades programs improving two neighborhood areas by building tot lots, painting, laying concrete sidewalks and walk-ways. During evenings, educational, cultural, and recreational activities would be provided.

Provision was also made to give each enrollee a ten-dollar-weekly living allowance, which he received prior to going home for the weekend in a simulated industrial pay-line. Those trainees who completed the full six weeks were instructed that they would receive a twenty-five-dollar bonus. This was part of our search for guide lines in regard to a meaningful new system of rewards to motivate these out-of-school youth. Throughout the program we also made use of the fact that the program was voluntary and that approximately eighty others had appeared the initial day asking to be admitted. This was well known to them since a number of those who had to be placed on a waiting list in case of a high rate of attrition the first two weeks were their friends or relatives.

During the final week of the program, the project carried out its responsibility for making each trainee aware of existing public and private training and employment opportunities in the community. Leaders of such programs, as well as representatives of the Philadelphia School District, accepted invitations to speak to the group. The Pennsylvania State Employment Service registered each boy during this "phase-out" week and arranged for personal interviews in its own offices.

The week concluded with a graduation ceremony largely arranged by the student government council. This group was elected during the second week of the program by the enrollees, who were divided into groups of ten each and assigned to one resident counselor. The student government council met at least twice per week throughout the final month of the program with the program director, two counselor supervisors, and a representative of the counselor group. This aspect of the pilot program is discussed in greater detail later in this paper.

GENERAL FINDINGS OF THE PILOT PROGRAM

Attention was first given to a descriptive analysis of the population of out-of-school unemployed youth referred to the pilot residental educational project on the University campus. Racially the one hundred selected were 68 per cent Negro and 32 per cent white.

A wide range of intellectual capacity and achievement was noted. Their intelligence quotients, measured by techniques with the least amount of cultural bias, ranged from 66 to 120. Reading and mathematical achievement ranged from first-grade to twelfth-grade level. In fact, 20 per cent of the group were so advanced in reading that special provision was made to provide a widening experience with literature and language development. Plans had been made to have the entire group participate in a remedial reading program using the "Words-in-Color" technique developed by Dr. Caleb Gattegno.[4]

Judgment of the economic status of the families of the enrollees was based upon the occupation of the parents. Information on this factor was obtained before the program started for 82 per cent of the families. Out of this group, 92 per cent could be designated "working class." Of this number, 14 per cent worked so infrequently that they might be further classified as "welfare-working-class." This is consistent with other studies of dropouts which indicate they are usually from low-income groups, generally trade or labor occupations.[5]

The impact of the program upon the participants is seen best perhaps in the fact that ninety of the original one hundred completed the program. Of the low 10 per cent attrition rate, 7 per cent were those dismissed from the program because of infraction of the rules set by the administration. During the final week when all ninety of the trainees were interviewed by school, state, and federal agency representatives, twenty expressed interest in returning to school. Ten were interviewed for employment by the University of Pennsylvania, five expressed interest in entering the armed forces, and the others indicated serious intent to enter full-scale training programs under the Youth Job Corps of the Office of Economic Opportunity.

The main gain in reading and mathematical achievement was one grade-level. Moreover, considerable insight was gained concerning the limitations of traditional educational techniques and materials. Much of this we learned by listening to the participants and seeking their counsel and reaction as to their needs, readiness to learn, and factors influencing their motivation.

THE STUDENT GOVERNMENT

Perhaps more was learned in respect to the latent capacities of the enrollee group when they were made a part of the policy and decision-making apparatus through the establishment of the student government council than in any other program element. Equal opportunity programs, whether in an educational or vocational setting, are rehabilitative in character for those who have not learned productive employable skills and behaviors in our society. Such groups, whether school dropouts, delinquent youth, slum dwellers, racial minorities, or the unemployed, feel alienated, often sullen and unhappy. Great reliance is placed upon deriving satisfactions from the peer-group culture. The school dropout hangs out with the corner gang in the urban community, adopts its dress, language, and code of behavior. Communication from outside this network is often not trusted. For the same reason people living in "pockets of poverty" disbelieve messages from outsiders that jobs or opportunities are available outside their narrow orbit. It is easy for society to establish these opportunities, announce their availability via the usual media, and then be embarrassed by few participants or alarmingly high attrition. The argument is that early in such planning, the leadership of the participant group themselves must be identified and play a key role in such planning. The modest experiment reported here suggests that the student government group was largely capable of regulating itself and apprising the administration of program needs and direction. The council group capably dealt with such issues as (1) lateness and tardiness; (2) care and loss of equipment; (3) how best to discipline the enrollee for failure to carry out orders; (4) recognition of special learning problems in their peers; (5) the impact of a lifetime of discrimination upon the enrollee's ability to perform educational and vocational tasks; (6) how best to handle serious (versus minor) fights between enrollees; and (7) when and how to handle other interpersonal and intra-group problems as they affect living and working together.

Conceptually the point can be made that effective rehabilitative efforts must work toward a unified social system in which authorities and participants alike are devoted to one task — helping each individual to realize his maximum potential. In order to accomplish this, programs must avoid establishing the administration as authorities who serve as "rejectors," making inevitable the creation of two social systems within the program. This philosophy of operation has best been articulated in rehabilitative programs developed in Utah[6] and New Jersey[7] for the institutional care of delinquent youth.

Both programs make effective use of peer-group leadership. It has been found in both these progressive efforts that a rehabilitative system is most effective if the delinquent peer-group is used as a means of perpetuating the norms and imposing the sanctions of the system. Evidence is accumulating which suggests that the peer group is viewed by delinquents as the primary source of help and support. Although the pilot program reported here was voluntary and did not deal with court-adjudged delinquents, our experience was consistent. It is of some interest to speculate about the degree to which equal opportunity programs would be more effective in educational and vocational settings, as a function of establishing a mechanism to utilize the participation of indigenous leadership.

FOOTNOTES

1. G. P. Harnwell, quoted in "Six Weeks' Summer Session — with *A Difference,*" *The Pennsylvania Gazette,* Vol. 63, No. 1, October, 1964, pp. 11-14.
2. This program for out-of-school youth was different in this respect from programs also begun in the summer of 1964 at Princeton, Yale, and Dartmouth for youth from low-income groups all of whom, however, were felt to have the potential for matriculation in college.
3. The rejection rate for physical illness or addictive states was a surprisingly low 6 per cent of the 180 examined.
4. This technique uses color groupings which illustrate the 271 combinations for the 47 basic sounds in the English language. The materials are published by the Encyclopedia Brittanica and are currently being experimented with in literary training for a variety of age-groups in the U. S. and Great Britain.
5. D. Schreiber, *Guidance and the School Dropout* (Washington: National Education Association of the United States, 1964). See also L. M. Miiller, *Reference on Dropouts,* U. S. Department of Health, Education, and Welfare, Office of Education (Washington: Government Printing Office, October, 1962).
6. L. T. Empey and J. Rabor, "The Provo Experiment in Delinquency Rehabilitation," *American Sociological Review,* Vol. 26, No. 5, October, 1961, pp. 679-695.
7. H. A. Weeks, *Youthful Offenders at Highfields* (Ann Arbor: University of Michigan Press, 1958).

PART VII

Business and Professional Jobs and Negro Leadership

26

THE NEGRO PROBLEM OF ENTREPRENEURSHIP

William Gomberg*

To assert that America is a land of immigrants is a truism. The economic study of America is a study of migrant nationalities coming over in succeeding waves, bringing with them little capital except their willingness to work. Each wave coincided with an expanding demand in the labor market for semi-skilled and unskilled workers in an industry on the verge of explosive growth.

The Irish, in the mid-nineteenth century, made up the laboring corps, laying our railroads from east to west; the Chinese coolies made up the construction gangs building from west to east; the Italians provided the construction personnel for our eastern subways and buildings; the east European Slavs went into the mines; and the Jews into the ready-to-wear garment industry and retailing.

The most energetic members of these groups strived to accumulate some little measure of capital and eventually went into enterprises of their own. They became the employers in many cases of their fellow nationals. The offspring of the original migrants were educated in our schools and colleges. In the mobile society of America, many of them found their way into business careers and professional practice, and can be little distinguished from the American mainstream into which they have been absorbed.

The Northern Negro, in a sense, is a part of a migratory wave from the South where the mechanization of cotton cultivation has displaced him from his historic job — cotton chopping. He resents the combination of restricted economic opportunity and political disenfranchisement exactly the way the Caucasians from western Europe did in their original homes. He too seeks to improve his lot by fleeing north. When he arrives, he finds that though opportunity may be better than at home, he is subject to the same kind of exploitation that every greenhorn group experienced in its beginning years.

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The Negro, however, has two additional problems. One, he is entering the labor market for semi-skilled and unskilled work when for the first time in our history, the labor market for this kind of work is contracting. Second, he is saddled with permanent prominent visibility. There is little that we can do about the Negro's visibility except hope that a developing emotional maturity of our fellow citizens will cease to make this a handicap for the Negro. After all this kind of prejudice is the white man's problem. Only we can correct this kind of irrationality. There is not much that the Negro can do about our problem, mine and yours.

Now, what about this other problem? The problem of the Negro as an employee, what about his prospect as a businessman, as an administrator, as an entrepreneur? The problem of a fair share of employment for the Negro employee has been treated elsewhere.

The common explanation for the paucity of Negroes in enterprises of their own is attributed by academic scholars to a wide variety of causes.

Some of them follow:

1. The Negro culture since slavery lacks family solidarity. The family unit is loosely built. This prevents the family accumulation of capital from the earnings of its members to finance the more energetic member in starting an enterprise.

2. There are virtually no successful business members of the family group who can set an example of triumph for the youngster to emulate.

3. The Negro has virtually no business skills. He has not had the opportunity to learn business technique by either informal instruction or formal university training.

Somehow all of these reasons sound so logical and self-satisfying that they remove our responsibility for what we find, or better yet, do not find.

Harding Young and James Hund[1] have made a study of Negro entrepreneurship in the South. Given the entrepreneurial climate of the South until relatively recently, it is a miracle that any Negro entrepreneurship has shown itself. Ordinarily, skilled craftsmen are the self-starters in creating new enterprises with their technical skills as a core asset.

When slavery terminated, the Negro found himself barred from the crafts. The more ambitious, newly-emancipated slaves hoped to satisfy their drive for prestige by (1) learning Greek and Latin, (2) holding public office, and (3) becoming preachers.

The second ambition was suppressed after reconstruction and has only begun to emerge again now with the enfranchisement of Southern Negroes.

Business careers simply did not hold any attraction for Negroes as a group. What is more important is that many of the Negroes with entrepreneurial drive migrated northward.

Despite all these handicaps, nevertheless, there did emerge an active Negro business life. Negroes did create banks, savings and loan associations, and insurance companies, and this in the face of a social climate that varied from indifference to active hostility.

Negroes seeking credit from white banks that loaned on character had no character as far as white banks were concerned. The answer of the Negro was to create highly successful fiscal institutions in the face of odds strongly against them.

It might parenthetically be added that the few white institutions which were willing to assist them found themselves the beneficiaries of valuable business from which others had barred themselves.

Some 94 per cent of Negro businesses nevertheless remain in retail trades and services, where they employ from two to twenty employees. The Negro financial institutions are a source of credit to these small enterprises.

The reaction of the white financial community to this activity is most revealing. Upon the organization of a Negro commercial bank in Houston, white lenders suddenly began to make an effort to search out Negro customers for real estate loans who would make good loan risks.

It seems to me that the seething cauldron of the Negro revolt is a signal that there is much entrepreneurial drive seeking to be channeled. Wise business leaders in the white community can identify themselves with this striving and thereby both fulfill their own "good works" instincts and find new sources of business for their institutions.

After all, the secret well-spring of the growth of the Bank of America is best understood when we remember that A. P. Giannini, head of the predecessor Bank of Italy, was willing to extend credit to groups of Jewish immigrants engaged in that most chimerical speculation – the early moving-picture industry.

I, for one, reject the pat sociological apologies mentioned earlier for the status quo.

At the turn of the century, John R. Commons, foremost labor analyst of the day, explained why the Jews could never organize a successful trade union in the clothing industry. They all had the instincts of small businessmen. Yet within a comparatively few years after Commons made this statement, three of the most respected labor unions established themselves: the Amalgamated Clothing Workers of America, the International Ladies Garment Workers Union, and the Hat, Cap and Millinery Workers Union.

Is the dismissal of the Negro as an entrepreneur as superficially founded as were John R. Commons' observations about the Jews?

The Wharton School of the University of Pennsylvania is considering the establishment of a center for the specialized study of the economic problems of minority groups in our population.

In the course of surveying the area of economic activity in which Negroes find themselves, we undertook first to distinguish employment from management and then to separate those Negroes who are in administration management from those who are in the entrepreneurial management.

At first blush this may strike the reader as a distinction without a difference, but a closer look at what we have in mind and a more careful look at the myriad functions subsumed under the rubric "management" will help make the difference clear.

The primary functions of the entrepreneurial management of the autonomous enterprise may be listed as follows:

1. Creating a new organization for exploiting economically one or more ideas.
2. Reorganizing or absorbing an old organization to revamp old ideas or to infuse new ideas.
3. Dismembering and liquidating organizations, whose idea-base has become obsolete and unprofitable.

All three of these activities can be included in the term "problem formulation." They make up the basic functions of entrepreneurial management. The entrepreneur-manager takes amorphous material, neutral information and ideas and combines them in a seminal fashion into a producing, organizational structure. He thereby performs the innovating function of any economic system.

Managerial efforts devoted to supervision, control, and such forms of decision-making make up the technology of management. Such managerial functions are of substantial importance, but by the very nature of the management process, these decision-making functions are derived from and subsidiary to the basic entrepreneurial function that determines the character and the economic course of the enterprise.

The distinction between the technology of management and the entrepreneurial function of management was the subject of comment by Frederick W. Taylor. He observed as early as 1905 that ". . . there is no apparent relation in many, if not most cases, between good shop management and the success or failure of the company."[2]

Thus the generic term "management," as it is used loosely in current literature, encompasses three hierarchies of activities:

1. The entrepreneurial set of activities.
2. The administrative activities.
3. The routine supervisory duties.

We distinguish these three levels of management as entrepreneurial management, administrative management, and supervision.

Administrative and supervisory activities have received much the major portion of scholarly attention. This has not been without its useful aspect. The emphasis on decision-making has led to the examination of well-structured problems that follow in the wake of entrepreneurial creativity. However, the principal work of the entrepreneur is the formulation of what the problem is rather than the determination of a decision. The resulting decision is implicit in the way the problem is formulated. The great emphasis on decision-making, as by far the most fashionable phrase in current business literature, has obscured this distinction. Actually, close observation discloses that there is a constant conflict between entrepreneurial management on the one hand and administrative and supervisory management on the other.

This basic idea and its implications have been developed elsewhere. It does give us an adequate idea for our purpose to separate out Negroes in corporate management from those who are self-starting.

Ebony magazine serves the same purposes in the Negro community that *Life* does in the entire community: the creation of celebrities, that is, personages to emulate. The editor chooses Negro success-images in the economic life of the country. It is revealing to examine the weekly two pages called "Speaking of People," a regular feature of each issue. *Ebony* celebrates *People* who are in a success in the following government, corporate, or independent professional fields:

*Entrepreneurs	2
Corporate professionals or executives	17
Eleemosynary professionals or executives	7
Government professionals	9
Independent professionals	2

In an analysis of 37 celebratees listed in eight *Ebony* issues, only two can be even vaguely thought of as entrepreneurs.

*See *Ebony,* May '62, March '63, January '64, April '64, May '64, October '64, November '64, January '65.

In other words these successful Negroes are mostly never independent entrepreneurs; they find themselves corporate professionals or occupants of political shelters such as eleemosynary institutions or government units.

Ebony published a special "festival" issue in September, 1963, the 100th anniversary of the Emancipation Proclamation, in which it celebrated Negro business achievements. These are the men who literally pulled themselves up by their bootstraps, making a contribution to the economic health of their communities and furnishing employment for their fellow Negroes. Among those listed are the North Carolina Mutual Life Insurance Company in the South and the Supreme Life Insurance Company in the North, the largest Negro-controlled insurance companies in the country. It is relatively recently that the North Carolina's president, Asa T. Spaulding, has received acceptance by the business community. Little wonder that he muses: "We had to make bricks without straw and we did it."

The efforts of Negroes to gain economic independence is not a recent development. As early as 1907 Booker T. Washington, founder of the Negro Business League, observed that Negroes organized to own and operate oil wells in Indian territory; that Negroes owned and operated a trolley car line in Jacksonville, Florida. Truman K. Gibson, Sr., another successful Negro entrepreneur, recalls the missionary spirit about Negroes' going into business and gaining economic independence. This spirit was repressed to some extent for many years but under the new political climate engendered by the civil rights agitation it is hoped that this entrepreneurial drive will once again assert itself. It is significant that the children of this middle class offer a disproportionately large part of the leadership of the Negro community in carrying on the agitation to make the 13th, 14th and 15th Amendments come alive.

To be sure, the Negro community has its dissenters. The late Franklin E. Frazier,[4] former president of the American Sociological Society and professor at Howard University, denigrates the role of these business entrepreneurs, though he does hold out hope for their children.

He refers to the myth of Negro business, whose combined assets do not attain the net worth of numerous single white corporations. He expresses his contempt for their catering to the worst in white society, with all the trappings of "society and debutantes." He rails against their lack of involvement in the aspirations of the Negro lower classes. Their highest desire is to pass in white society; they are worthy successors to their ancestors who were Negro owners of Negro slaves in colonial Virginia.

Whitney Young,[5] president of the Urban League, is somewhat more temperate in his assessment.

He is concerned about the growing social gap between the Negro middle class leadership and the masses they are called to lead. He does point out that the children of this middle class lack the drives "to pass" of their elders and have thrown themselves into the civil rights struggle.

Every minority in American history has gone through a similar development. The more ambitious are seldom the more introspective. The first desire is for recognition in the host society. The victim of discrimination seems to be the "white Negro" or "well-mannered Jew." He seldom gains this acceptance and is thrust back into the society of his minority and remains there until the entire minority gains acceptance without patronage.

The experience narrated by Frazier is his reason for persuasion; the same experience described by Young is a fountain of hope.

There is little doubt that the future lies with the young offspring of the middle class. Until the members of the Negro community gain economic strength, they will be regarded even by liberals as wards of the white society. Political recognition is coming fast, and if followed by widespread entrepreneurial activity, the day of full social parity cannot be far off.

Few people are as aware of the limitations of small business opportunities as a professor in a business school. Yet when we look backward and attempt to put ourselves in the time perspective of fifty years ago, did not independent business undertaking look to these ancestors of ours as ill-fated as it does today? How could any man survive the power of the big trusts? And yet look how many major enterprises were born in that era.

Only the future will tell.

FOOTNOTES

1. Harding B. Young and James M. Hund, "Negro Entrepreneurship in Southern Economic Development," from Melvin L. Greenhut and W. Tate Whitman, *Essays in Southern Economic Development* (Chapel Hill: University of North Carolina Press, 1964), pp. 112-157.
2. Frederick W. Taylor, *Shop Management* (New York: Harper Brothers, 1947), p. 19.
3. "The Negro in Business," *Ebony*, September '63, pp. 2-11.
4. Franklin Frazier, *Black Bourgeoisie* (New York: Collier, 1962).
5. Whitney Young, "The Role of the Middle Class Negro," *Ebony*, September '63, pp. 66-72.

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NEGRO EMPLOYMENT IN WHITE COLLAR AND PROFESSIONAL JOBS*

Mahlon T. Puryear**

For those of us who have interest in and concern for some of the problems inherent in making greater use of the nation's manpower, this opportunity to identify, renew, and discuss our experiences is most welcome. We, of course, are grateful to the planners of today's program for making this possible.

I have been asked to talk about prospects for Negroes in white collar and professional job areas and about what the Urban League has been doing as it sought ways to implement meaningful job opportunities programs. I also would like to enumerate some of the things we might do together, in the days immediately ahead, in order that our combined efforts might have a real impact on overall expanded job prospects for all workers.

It is not always easy to approach our subject completely without emotion or subjectivity. For example, it is extremely difficult to refrain from mentioning my dismay that we find ourselves in 1964 involved in this discussion of job opportunities for *Negroes* — when, by now, we might have hoped to be able to turn our attention to *manpower needs, without regard to race or color.* We know we cannot do this as long as there exist many of the inequities in opportunities known to all of us.

In order to fully understand what progress has been made, or just how big a job lies ahead, I scanned a couple of reports we developed a year or so ago. I need not go into a full-blown story of the problems Negro workers have faced in recent years, but I would like to cite a few very significant figures to illustrate why we *should* devote time and energies to this important subject. Significant, also, is the fact that the year of research – 1961 – coincides with the year the Urban League moved into an era of new administration, community image, increased financial support, and commitments to expanded opportunities in jobs, education, housing, and health services.

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*A speech delivered at the luncheon meeting of the Labor Relations Conference, University of Pennsylvania, "Equal Opportunity — The Job Aspect," on November 13, 1964.

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Also, 1961 was the year in which many other groups began to review their roles in bringing about effective changes in the status of Negro Americans. They, too, entered an era of increased research, studies, and expanded efforts in trying to determine the role Negro workers play or do not play in the social, cultural, educational, political, and economic life of America.

The reports have covered a wide area. The Negro has been called a *burden on society* because he is so dependent upon welfare services and other assistance from public agencies. He has been called *socially deprived* because he has been a social outcast, having been a victim of a social system which not only relegated him to a second-class citizenship, but also used legal means, as well as customs and traditions, to deter his efforts to change his status.

The Negro has been called *culturally deprived* because he so often lived in communities where cultural activities were not available to him, or his very fight for survival often did not include the time or energy to develop interest in or taste for such activities.

He has been called *educationally deprived* and *intellectually unfit* because he has not been able to develop the background necessary to acquire the training and experience required to compete in the job market.

He has been called a *political novice* because, I suppose, a group which has so long been denied the simple right to vote could certainly not develop very much political sophistication.

The Negro has been called a *low producer* because he has worked mainly in unskilled, menial, or, in fact, disappearing job categories. He has been called *unqualified as a worker* because of the serious lack of education and experience so often required when he sought new or advanced job opportunities.

To some degree, there is truth, a lot of truth, in each of the above statements. We cannot, however, accept them as stated, for to do so is to accept the stereotype so well known to all of us.

Whatever the status of Negro workers generally, the plight of those who work in white collar jobs, or even those who aspire to do so, is even more serious. For this group of workers or aspirants includes those persons who accepted the advice of adults – teachers, counselors, parents – and stayed in school to acquire the educational backgrounds that were to lead to rewarding jobs in business, industry, government, and education. This is the group which, if working, has found entry jobs available, but upgrading, transfer, and promotion out of its reach. Included also in this group are those thousands of teachers and administrators relegated to working in inferior segregated school systems in the North and the South, and from which we have not been able to develop the kinds of students who could take advantage of newly developed opportunities for continued study or work.

The 1961 research figures reveal that Negro workers were 14.1 per cent, compared to 45.6 per cent for others, employed in skilled, white collar, and professional jobs. If you take out of the 14 per cent figure those employed in segregated school systems and colleges in the South, and those Negro professionals serving Negroes mainly, the remaining percentage is extremely small.

Speaking more specifically, we found:

- that there were 3,662 Negro accountants and auditors as compared to 463,934 others;
- that there were 233 architects as compared to 28,813 others;
- that there were 1,998 Negro dentists compared to 78,200 others;
- that the ratio of Negro physicians and surgeons to others was 4,706 to 218,904;
- that among aeronautical, civil, and electrical engineers, the ratio was 2,794 to 380,273;
- that in the area of business management, the ratio was 73,433 Negroes to 4,420,894 others — with 45,464 of the 73-odd thousand Negro managers being listed as self-employed.

These figures prevailed in spite of increased efforts by employers during and after World War II.

In the area of work in business, we find that the Negro has made his greatest contributions in businesses which serve the Negro community — insurance, banking, and personal services. He is not a substantial participant in the over-all business world because he qualifies as neither lender nor borrower of important monies. He most certainly does not qualify as an important stockholder with major firms, although he seems to make great efforts to develop and hold on to whatever he chances to acquire.

When Negroes did have an opportunity to participate in over-all economic development, they were generally not given equal pay for equal work. That this difference in income has widened in recent years is reflected in the fact that today Negro workers, as a whole, earn only 53 per cent as much as white workers, a drop of 4 per cent since 1950. Also, 62.4 per cent of Negro families earn less than $4,000, while 70.6 per cent of white families earn more than $4,000.

Among white collar workers, one finds that college graduates, as a whole, may expect to earn $9,000 per year. For Negro college graduates the figure is $5,400. This is due to the fact that most Negroes, even in white collar jobs, work at the lowest-paying levels and, so far, have not had sufficient opportunity to work in as wide a variety of jobs as have other groups.

Until quite recently, neither business, industry, government, labor, nor education could point with pride to its record in making full use of available manpower in this country. Too often our concerns were in getting the job done, with little attention paid to total contributions which might be made by those who worked.

Many persons did not realize how really serious the situation was. In business, we had produced outside the Negro community only one corporation president; fewer than eight directors on major corporation boards; fewer than six vice-presidents, and several of these dealing with the "special Negro market." Most of us here know personally all of the Negroes who hold top-level jobs in industry and business.

In government, the situation was certainly one which presented a very interesting picture. Here we have had the advantage of fair employment programs dating back 90 years. We have had state and city ordinances guaranteeing equal employment opportunities all through those years. Yet, we cannot point with pride to the fact that some four years ago, there were only three Negroes in the Southeast holding federal positions above GS-8 — except those in post office jobs or those dealing specifically with race relations. Negroes held, and still hold, few supervisory jobs in most governmental work areas.

At the state and city levels of employment, the situation was certainly no better, as politics played such an important part in the selection process. We undertook as an assignment a few years ago the task of reviewing the make-up of the various agencies which had been set up to deal with the identifiable problems of Negroes. We were amazed to note that in the large majority of instances these agencies themselves were not examples of progress. Too often they were politically conceived and were thus politically staffed and operated.

In higher education, other than Negro colleges, we have not produced one president of a college or university, not a dean, and very few department heads. There are surprisingly few Negroes holding *full* professorships in major universities. This is true in spite of the fact that Negroes have been graduating from these institutions for more than a hundred years.

The opportunity to learn, to acquire meaningful experiences, to explore, to make mistakes and recover from them, to be a part of the whole and not just a segment, to be understood as having desires, aspirations, ambitions, and feelings for America, has not typically been the lot of Negro citizens.

Fortunately we are now moving ahead, and we are making some real progress. The period since 1961, then, represents the era of greatest progress in providing expanded job opportunities for minority groups. While state and local groups were retooling, improving techniques and methods for dealing with minority group employment programs and problems, business, industry, and our national government were taking the lead.

What has been done in your business, with and without governmental assistance, is better known to you than to anyone else. Among the firms represented here can be found some of our most productive merit employment programs. Represented here, too, are firms into whose merit hiring and upgrading activities have gone sober thinking, resourceful planning, and meaningful implementation efforts.

What you have done has had telling results in a number of ways: (1) There is now closer cooperation between those who seek workers and those who offer responsible leadership, guidance and assistance to employers; (2) You are now identified with and actively participating in programs designed to narrow the gap which has for so long existed between Negroes and other citizens; (3) You have increased your support of agencies and institutions having major responsibility for the preparation of new generations of Negro Americans; (4) You have increased the number of Negroes now employed in supervisory and first-level management positions in business and industry; (5) You have increased recruiting on campuses whose student bodies are predominantly Negro; (6) You have initiated and expanded summer and part-time work experiences for Negro teachers; (7) You have expanded summer employment opportunities for Negro college and high school students, particularly in governmental departments such as Labor and Commerce; and (8) You have expanded opportunities to learn and work in major educational settings.

As an Urban Leaguer, I take some pride in knowing that we have worked, hand in hand, with many of you who have been associated with these examples of progress. For many years we have placed major emphasis on finding new jobs for qualified Negro workers. We have had a part in numerous programs related to integrating the work force at all working levels. We are known the country over for our efforts in helping America prove to itself that a more equitable use of Negro manpower is a *must* if we are to solve the problems of automation, unemployment, underemployment, and improved education.

From a pilot placement program in 1945 which placed hundreds of Negro workers in new job situations during the 1940's and 1950's, we have moved to the establishment of a reservoir, or *Skills Bank,* into which is being placed information on men and women who are available for jobs anywhere in the country. In addition to those seeking initial employment, or those struggling to leave the ranks of the unemployed, our files cover individuals who have not found promotion or upgrading possible in their present jobs.

In our national office and in 56 local *Banks* in 56 Urban League cities are more than 10,000 résumés of Negroes now qualified to do almost any job available, or possessing the necessary background and education to learn after employment. These people can work in your offices, your development centers, your personnel departments, your sales units — anywhere you need help. We welcome, in fact, we urge your making greater use of this resource, for to do so is to step up the pace of any equal-hiring program.

We have always worked very closely with the leaders of business and industry through their membership on our *Commerce and Industry Council.* In addition to providing an excellent source for counsel, advice, and assistance in developing realistic job development and employment programs, the council plays an important role in our fund-raising activities — and serves as a sounding-board for new program ideas.

Most recently, we requested and secured the council member firms' participation in a *business and industry orientation program for administrators and teachers* in predominantly Negro colleges. This project, which we expect to get under way shortly after the first of the year, is designed to provide a four-to-six-week work orientation experience for the professional personnel responsible for the education of the majority of Negro students.

In Urban League cities across the country, we are providing a variety of programs which serve to assist employers in finding qualified workers. *Urban League-industry co-sponsored secretarial training programs* are in operation in Pittsburgh, Omaha, New York, and St. Louis. On-the-job training projects, financed with federal funds, are now in operation in New York, Cleveland, and Pittsburgh — and others are to begin shortly. Urban Leagues in many cities are active participants in recruiting and referring Negro youth and adults for MDTA training programs. On December 9, 10, and 11 we are holding a conference of some 300 Negro leaders to discuss active participation in the anti-poverty program.

We are now cooperating with many companies in their management training programs. Here we believe that we can be of even greater service because we feel very keenly that our involvement provides, for both management and the Urban League, a most effective way of discussing and solving programs and problems in human relations and manpower utilization.

Management, more and more, is calling on us for assistance in developing college recruiting programs. We think this is sound, for our staff has had a long-standing working relationship with educational leaders.

Because of the respect we command in the Negro community, we play an important role in interpreting to Negroes changes that are taking place in the job market. We also serve management, on the one hand, as a screening agency in recruiting and hiring — and the Negro citizen, on the other, by helping him to attain the training and other experiences needed to find satisfactory employment.

We are also fortunate in that the Urban League's Executive Director, Whitney M. Young, Jr., has earned the respect of leaders in all walks of life in America. We who work with him sense our responsibility to constantly seek out those persons who can, and will, work with us as we move ever forward toward the goal of equal opportunity.

Yes, much has been done, but there yet remains so much more to be done.

We must first accept the fact that the solution to problems faced by Negro workers must be given priority treatment *now* if the recent gains are to be maintained and enhanced. Every force in government, labor, industry, business, and education must work as hard as humanly possible to push ahead in all positively-oriented job opportunities programs for Negroes. This means that programs of recruiting at the high school and college levels, of initial hiring, and of upgrading for those already employed, must be re-examined, re-defined, and given new emphasis in order that they have real meaning for Negro job-seekers.

Policy statements as now recorded by every leading employer in the country must be translated into practices from the corporate office to the janitor's supply room, and must apply to white collar jobs as well as blue collar jobs.

Since education plays such a vital role in the development of the work force, education processes and practices must in fact be made more democratic. Negro youth and their parents, North and South, East and West, need to see more examples to prove that staying in school to get a good education is more profitable than being a dropout or the recipient of public assistance in a new form.

Employers who have questions about the application of the Fair Employment Practices Title of the 1964 Civil Rights Act would be unwise to spend time trying to figure out how to comply *next* year. The rest of *this* year should be used to plan purposefully, to plan with diligence, and to plan productively, ways of making merit employment work – all of which will give less and less meaning to the compliance portions of that act.

Together, we must plan and implement job expansion programs which show real imagination and determination and which will give further evidence to Negro job-seekers that they, too, can have an equal share in developing our expanding economy.

28

EMPLOYMENT PROBLEMS AND NEGRO LEADERSHIP*

Roy Wilkins**

The continuing campaign for the upgrading of America's Negro minority must continue to engage the attention of the business, industrial and financial community if we are not to have serious disturbances in American life.

This is no sensational threat based upon an emotional fever. It must not be ascribed erroneously to a protest demonstration in a particular locality. It is not the consequence of the appearance, the truculent language, or the activity of self-styled "militant" leaders of the protest movement.

The serious disturbance that could occur unless more than routine remedial steps are taken has its roots in the generations of racial proscription that have operated on the Negro-white situation in such a widespread, complex, rigid, and implacable fashion as to present our country today with an explosive condition. This portent is reflected in unanswerable statistics, extending over decades, of which the erupting protests are but an inevitable symptom. To paraphrase an old, but descriptive, cliché, "The chickens of neglect, of contrived and imposed inequality, and of plain, unvarnished racial prejudice are coming home to roost."

Any student or mere casual inquirer into America's racial difficulties must be appalled at the complex interrelationship of the factors that have produced the present very real threat. Where does one begin? With education? With morality? With political democracy? With economic opportunity? With family and neighborhood life? With the stimulation of youth and the rewarding of adults?

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*A speech delivered at the dinner meeting of the Labor Relations Conference, University of Pennsylvania, "Equal Opportunity—The Job Aspect," on November 13, 1964.

**Executive Director, the National Association for the Advancement of Colored People.

With the re-education of both races? In every area records of disappointment and despair abound.

We have just come through a nation-wide election campaign in which one of the principal proposals was that this whole area of redressing the acknowledged racial inequities in all aspects of citizenship be left to the local and state communities, with emphasis to be placed upon voluntary action, upon the "minds and hearts of men." Federal action to delineate, protect, and enhance constitutional citizenship rights was denounced by the nominee and by the thinkers who took over the Republican party. This view, fortunately for the nation as a whole, was emphatically repudiated on November 3.

As in every election, many ingredients shaped the repudiation, but few will discount the potency of the civil rights issue. It seems undeniable that the states of Mississippi, Alabama, South Carolina, Georgia, and Louisiana registered their totals on the basis of the Republican candidate's stand on the civil rights issue.

It may be a kind of encouragement to the optimists that the recorded support for a stand-pat, or at best a very slow movement, was limited to a majority in only five of the fifty states. Realists, however, are sobered by the fact that the obdurate attitude which has brought us this far toward disaster, has persisted in such a virulent fashion into the 1960's that segments of five states can still hark — officially and openly — to slavery time and to the vicious rear-guard roadblocks of the post-Civil War century.

Despite the warnings and the crusading of Negro civil rights groups since 1910, despite the steady alterations of the legal status of the Negro citizen, despite growing Negro political influence in non-Southern urban areas since 1930, white America continued its laissez-faire racial policy until jarred by the public school segregation ruling of the U.S. Supreme Court in 1954 in the *Brown v. Board of Education* case.

So deliberately did the nation react that the Southern rate of compliance was less than one per cent a year. The North sympathized with the Southern plea for "more time." It agreed with Dixie that the Negro was "going too fast" — at 0.9 of one per cent a year! The Northern attitude towards its own ghetto schools ranged from forthright action by a few cities through patchwork programs in many to incredulous denial and flat refusal to budge in others.

The attitude on school desegregation, embodying, it seemed to the Negro population, the whole frustrating concept of racial segregation and discrimination in American life and the determination to maintain it at all costs, led to the direct action protest activity. This began on a pilot basis in Oklahoma, Kansas, and Missouri in 1958 and 1959, caught on in North Carolina in 1960, and swept the nation thereafter.

American businessmen have a stake in the Negro's struggle for equality. Failure to redress his just complaints in this area could harass the economy, could spark upheavals in production, distribution and sales, and could, also, speed the creation of a permanently-unemployed Negro class, which would constitute an expanding financial burden upon the economy and a restive and potentially explosive cadre in every urban community.

Why are the Negroes so shrill in demanding jobs? Why did we have picketing of construction projects in Philadelphia and other large cities? Isn't the country in a boom period? Cannot one observe the increase in Negroes in white collar and technical jobs? Isn't the nation affluent? Isn't the fault really with the Negroes who, somehow, don't "measure up" to their opportunities?

Perhaps the most exhaustive study of the current economic status of Negroes in the United States has been made by Herman Miller of the Bureau of the Census. This report was presented before the 1963 hearings of the Subcommittee on Employment and Manpower of the Committee on Labor and Public Welfare of the United States Senate. Miller states flatly, "the Negro still ranks among the poorest of the poor and his economic status relative to whites has not improved for nearly 20 years." Miller asserts that it is valid to state that for the country as a whole Negroes have raised their occupational levels in the past 22 years at a faster rate than whites. But, he contends, the improvement in the occupational status of the Negro since 1940 is due only to movement from the rural South to urban industrial areas. Negroes who once were highly concentrated in sharecropping and agricultural labor have moved up to urban service jobs or to unskilled and semi-skilled factory work, and some few have moved into white collar employment. But there has been a parallel upgrading of jobs held by whites.

Moreover, during the past decade there has been no change in income differentials between whites and Negroes, according to the report: "In 1947, the median wage or salary income for non-white workers was 54 per cent of that received by the whites. In 1962, the ratio was almost identical (55 per cent)."

The concentration of Negro labor "in low-paid occupations such as laborers and service workers" is a fact not to be ignored. A Negro man who has not gone beyond the eighth grade has little chance of being anything other than a laborer, porter, or factory hand; 8 out of every 10 Negro men with 8 years of schooling worked as laborers, service workers, or in other unskilled jobs—compared with only 3 out of 10 whites with the same amount of schooling! The lifetime earnings of nonwhite elementary school graduates is about 64 per cent of the white total. Among college graduates nonwhites have only 47 per cent of the white total. The fact of the matter is that the average nonwhite with four years of college can expect to earn less over a lifetime than the white who did not go beyond the eighth grade.

Miller's presentation was strikingly confirmed in a recent study made by Dr. Vivian Henderson, professor of economics and business administration at Fisk University. The issue is not whether Negroes have made any progress, but whether it has been rapid enough to enable the Negro to adjust to an economy whose rate of change is cumulative and intense and undergoing revolutionary changes in the mode of production.

The truth is, as Professor Henderson points out, that "Negroes are on a treadmill and time is in reality 'running out' on them as a group, in their pursuit of parity with whites. The group has to run exceptionally fast in order to stand still." They continue to be confined to the lowest occupational categories. More than twice as many Negroes as whites are in the lower income brackets.

Henderson states: "Whites are acquiring the highest paying jobs in the higher occupational classifications. The benefits of general economic expansion and technology, therefore, have only 'trickled down' to the Negroes, putting more of them into wage and salary jobs. These benefits automatically produced high acceleration in the income change, but were restricted tightly to lower occupational classifications."

The need for unskilled labor has drastically declined, while highly skilled labor in a variety of crafts finds more employment. The very slow pace of manpower change and development among Negroes means that the colored worker is in an unfavorable position in relation to the requirements of the labor market. Excluding government, the areas of growth in employment generally are not the areas in which Negroes have traditionally found employment. Automation means there will be a further sharp decline in the need for semi-skilled and unskilled workers.

In 1960-61 in Chicago, Negroes were 20 per cent of the total labor force, but made up 43 per cent of Chicago's unemployed. The Negro unemployment rate was 11.5 per cent but the white unemployment rate was only 3.5 per cent.

Negro unemployment in Chicago has not changed for the better since 1950, and the concentration among Negroes has remained constant. Labor force projections indicate that there will be 450,000 more workers in Chicago's metropolitan area in 1970 than there were in 1960. One-third of these will be Negroes. Yet the trend of employment potentiality indicates that only 150,000 new positions will be created by 1970.

The entire Negro community throughout the United States is today faced with a crisis of unemployment. What for the white worker has been a mild or temporary recession has become for the Negro worker a major depression.

The U. S. Department of Labor, Manpower Report of the President for 1964 puts this grave matter in a capsule paragraph: "In 1963, there were more than 22 million nonwhites in the United States, most of whom were Negroes. Nonwhites comprised 11.7 per cent of the population, 11 per cent of the work force, and 21 per cent of the unemployed. These stark figures serve to dramatize the disadvantaged status of Negro workers, for their disproportionately high rate of unemployment is essentially the climax of all the discriminatory forces shaping the lives of Negroes . . ."

The *New York Times* has added its estimation: "Unemployment of these proportions were it general, would be a national catastrophe."

The challenge to business and industry management is nowhere better stated than by George Schermer of Philadelphia in his recent article in "The Personnel Job in a Changing World": "Those who possess some imagination and a broad grasp of economics will have no difficulty recognizing that the 22 million plus nonwhite Americans have the potentiality of becoming either a tremendous asset or an economic liability. The nonwhite population of the United States is larger than the total population of Canada. With adequate education, training, and opportunity, it can be a major force for productivity and an extremely lucrative market for goods and services. Without training and without opportunity, it is certain to become both a burden and a threat to the safety and welfare of the nation."

There will be efforts by minority groups to utilize the new Civil Rights Act of 1964 and the new anti-poverty legislation, as well as to renew their efforts under the National Defense Education Act, the Manpower Development and Training Act, the Area Redevelopment Act and the Public Works Acceleration Act.

They have found, in many instances, that the old patterns and handicaps are restricting their benefits under the various federal laws. For example, more than 40 per cent of the Negro trainees in the MDTA program were in the service category in June, 1963. There were but three Negroes out of 263 electrical, plumbing, and carpentry trainees.

Many applicants were hampered by lack of education and others by lack of working experience in the fields in which they sought additional training. A small ray of hope is contained in a spotty survey by *The Wall Street Journal* in early October, 1964, which reveals that some industry at long last is reaching for categories of persons long idle in the boom period, including the unskilled, teen-agers, women, the less educated, and the Negroes.

But the Negro position as to employment remains desperate. It is entirely valid to assume that much of the post-election activity of civil right groups will be directed toward opening up new employment opportunities, getting more jobs, getting more training for jobs, and winning promotion to better-paying categories. Employment discrimination along with that in housing and in public education constitute the targets, in the North, of all civil rights workers. If they are smart they will publicly assign no priorities, but privately they will concentrate on jobs, with schooling but a half-step behind and ghetto housing but a half-step farther back.

They will use every possible tactic and pressure, for they have the feeling, buttressed by the statistics, that they have been cheated these many years. They feel they will be shut out, with only infuriating tastes of the good life, unless they can institute a crash program in behalf of their millions of deprived adults and of oncoming millions of their youth.

Where negotiations fail or where agreements are not kept, where loopholes in the law are invoked, where hard noses meet the hard fact of discrimination, demonstrations undoubtedly will be employed. If the situation is an aggravated one, these demonstrations could get out of hand.

Undoubtedly, also, selective buying techniques will be called into play. Businesses, particularly consumer businesses, which accept Negro customers but refuse Negroes jobs will feel the outrage of the community. In contrast to demonstrations, these buying (or non-buying) campaigns are apt to be orderly, well organized and disciplined. Philadelphia Negro ministers have conducted extremely successful campaigns on the retail level and have won hundreds of new jobs. Similar campaigns in Savannah, Georgia; Jacksonville, Florida, and a dozen other cities have been successful. There are signs that this type of action will spread from consumer outlets to manufacturing and distributing firms if results should not be forthcoming in response to present efforts.

Management must meet the legitimate demands of the Negro community with a recognition, first, of their justice. It should anticipate the situation by assembling information about Negro employment in the localities concerned, about schools and training, about informed and responsible groups in the Negro community, and about the applicable municipal, state, and federal laws and regulations.

Sometimes a group of Negro ministers will be the key, sometimes one or more of the regularly organized civil rights groups, sometimes an ad hoc committee of persons new to negotiating, but sincere in their zeal and in their requests.

The George Schermer article, referred to above, goes into considerable detail on the handling of civil rights delegations and negotiations by management, stressing, correctly, that these are often less sophisticated and less disciplined than similar organized labor negotiators.

Sophisticated or not, the Negro and the problem are here, forced up from their burial below by the march of history. One hundred and one years have passed since the Emancipation Proclamation. Nearly two-score African nations have emerged as free people since 1957. Technology, transport, and communications have changed the world.

The United States cannot brush aside any longer the differential treatment accorded twenty millions of its citizens because of skin color. The evidence is in that the nation does not desire to stage a brush-off and will take positive steps. The court decisions, the executive action on the federal level by Presidents Roosevelt, Truman, Eisenhower, Kennedy, and now Lyndon Johnson, reinforced by the legislative concurrence of the Civil Rights Act of 1964, all signal a turn from the past to a new way.

The manner in which Southerners have begun, often reluctantly, to change, argues that despite the five-state minority of November 3, the clear trend is to non-discrimination as a working national policy. Business, which played a strong role in many a desegregation change in the South when politicians stubbornly postured and moralists abdicated, can lead the way now to folding the Negro into the economy and thus developing the strength that the economy — and the nation — must have to survive.

As must be apparent in today's world, that survival strength is only in part economic; in substantial, even determining measure, it is spiritual, a vindication of the dream of 1776, which every American carries in his heart.

VT 007 281
Grames, Wayne, And Others
Paramedical and Allied Health Service Occupations in Montana; A Survey of the Occupations, Manpower Requirements, and Training Needs Essential to the Support of General Health Services in the State of Montana.

Montana Occupational Research Coordinating Unit, Helena
Office of Education (DHEW), Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Sep68 41p.

*MANPOWER NEEDS; EMPLOYMENT STATISTICS; *EMPLOYMENT PROJECTIONS; *OCCUPATIONAL SURVEYS; HOSPITALS; NURSING HOMES; *HEALTH SERVICES; HEALTH OCCUPATIONS EDUCATION; HEALTH PERSONNEL; *EDUCATIONAL NEEDS; EDUCATIONAL PLANNING; QUESTIONNAIRES; OCCUPATIONAL INFORMATION
MONTANA

To obtain data regarding numbers of employees, vacancies, projected replacements, and projected new hirings, a list of 52 basic health occupations was compiled and given job titles, excluding physicians, dentists, osteopaths, chiropracters, optometrists, registered nurses, and medical administrators. Based on these, questionnaires on employment data were formulated and mailed to health agencies, physicians, and dentists in Montana. Responses included 41 percent of the 73 hospitals, 39 percent of the 79 nursing homes, 18 percent of 43 medical clinics, 4 percent of 555 physicians, and 8 percent of 346 dentists. (Only a 10 percent representative sampling was attempted for physicians and dentists). Percentages were extended to 100 percent in all occupations to achieve state-wide total requirements. The survey indicated that 1,444 nurse's aides, 694 licensed practical nurses, 276 receptionists, and 242 food service helpers need to be trained by 1973. The report points out that needs listed for all of the 52 job classifications appear conservative in view of the estimated expansion plans of hospitals and nursing homes, and normal job attrition. (JK)

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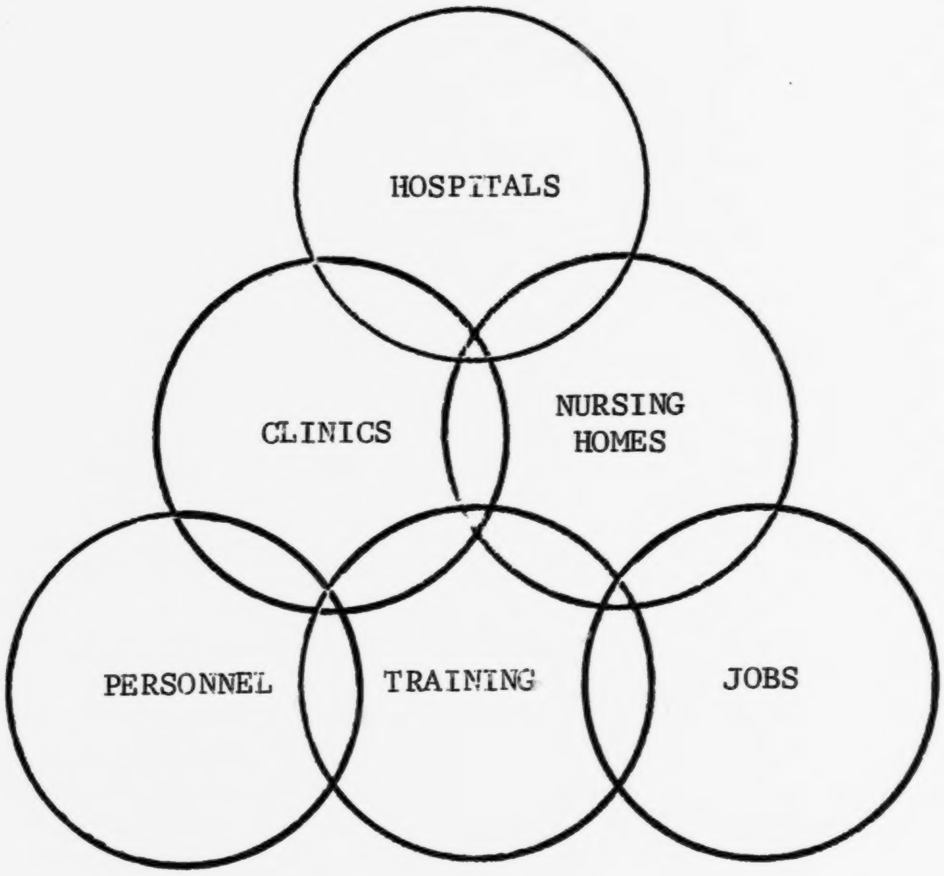
PARAMEDICAL AND ALLIED HEALTH SERVICE OCCUPATIONS IN MONTANA

A Survey of the Occupations, Manpower Requirements, and Training Needs Essential to the Support of General Health Services in the State of Montana



Research Coordinating Unit
Department of Public Instruction
Harriet Miller, Superintendent
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September 1968

VT007281

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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The work reported herein was performed for the Montana Research Coordinating Unit pursuant to a grant from the U. S. Office of Education, Department of Health, Education and Welfare.

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ACKNOWLEDGEMENTS

Validity in a survey of this type is directly dependent upon the perceptions and attitudes of various respondents and the accuracy manifested in the completion of the necessary forms. The time, consideration, and efforts required in answering survey questions by administrators in hospitals, nursing homes, and medical clinics, as well as individual physicians and dentists, deserves grateful comment.

Particular appreciation is hereby expressed for the assistance and support freely given by the following personnel in the initial preparation and development of this inquiry.

Dr. Everett H. Lindstrom, M.D., President,
Montana Health League

Mr. William E. Leary, Executive Secretary,
Montana Hospital Association

Mr. Roderic R. Gudgel, Executive Secretary,
Montana Nursing Home Association

Miss Anna T. Beckwith, R.N., Executive Secretary,
Montana State Board of Nursing

Dr. Frank L. McPhail, M.D., Director,
Montana State Study of the Western
Interstate Commission for Higher
Education

HARRIET MILLER
State Superintendent
of Public Instruction

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INTRODUCTION

The initiation of Medicare in July 1966 emphasized general insufficiencies in the field of the Health Services. The extremely rapid growth of private and governmental health insurance, "Poverty Programs" with added health services for the disadvantaged, the general expansion of public health programs, Medicaid, the population explosion, plus extended life span which has added greatly to the need for geriatic care for an ever-increasing elderly population -- all these have placed almost insuperable demands on an already overloaded medical system.

The net results are deficiencies which may be categorized as follows:

1. Insufficient numbers of trained professionals: Physicians, Registered Nurses, Medical Technologists.

2. Medical institutions inadequate in number and facilities: Hospitals, Clinics, Nursing Homes, and other forms of extended medical care.

3. Lack of training facilities for paramedical (individuals who work with, or in direct support of, highly trained professionals--Practical Nurses, Aides, Technicians, etc.) and allied medical service personnel (Clerks, Food Service, Maintenance, etc.).

4. A shortage of personnel who are basically qualified and willing to enter into the necessary training programs.

It has been estimated that, for effective operation, each medical practitioner must be backed by 50 to 100 personnel. Such personnel include laboratory researchers, technologists, technicians, nurses, orderlies, maids, clerks, and the like. While it is true that the education and training for a number of these positions require work at baccalaureate and post-graduate levels, the vast majority of paramedical or support occupations require less than two years of post-high school training. It is toward this latter category of occupations, skills, and personnel that this survey is directed.

Exclusive of health-related operations such as retail pharmacies, wholesalers and retailers of medical supplies, governmental health agencies, schools nursing programs, industrial in-plant health services, approximately 15,000 personnel are employed by Montana physicians, hospitals, and nursing homes. Such employment figures are rendered even more significant when it is realized that physicians, dentists, osteopaths, chiropracters, optometrists, registered nurses, and medical administrators are not included.

The scope and extent of specialization of employment in the medical services field is apparent from the fact that over 200 distinct types of non-professional, paramedical occupations have been identified and are utilized in significantly large numbers. Others are emerging, and still others, not yet known, are predicted to be forthcoming. This specialization has already escalated basic educational requirements from the 8th through the 12th grade and beyond, thereby greatly increasing the demand for trained personnel and expansions of training facilities.

PURPOSE OF THE SURVEY

In initial planning it was intended that this survey should aid in the identification of medical-related occupations of continuing demand to avoid future shortages of qualified workers. Solutions to current or potential problem areas were not attempted. Rather, the survey was an attempt to increase knowledge of the job market and labor force needed in furthering the efficacy of medical services in Montana, and to expose problem areas to enable employers and educators sounder bases for resolving manpower problems in medical institutions.

It is hoped that the information developed in this study will be of value to employers, to individual workers, and to youth entering the job market. The principal objectives of this report are threefold:

1. To provide a comprehensive source of information for use by counselors and guidance personnel in aiding Montana youth to make sound vocational choices.

2. To aid medical administrators by providing data which may prove to be of value in planning future growth and operations.

3. To provide base-line data for planning and implementation of effective vocational education programs.

THE SURVEY QUESTIONNAIRE

In the interest of complete accuracy and minimal misinterpretation, personal interviews and investigations might have been conducted with all participants in the study. However, economic considerations of personnel, time, and costs, precluded such an operation. Aided by consultation with various medical professionals and administrators, members of the Research Coordinating Unit began the preparation of a questionnaire to be utilized in a mail survey. As such work progressed, letters describing the proposed survey were dispatched to all hospitals, clinics, and nursing homes, soliciting their participation. Similar letters were transmitted to a representative group of physicians and dentists engaged in private practice. (Due to the number in these latter two groups, only a 10% sampling was intended.)

A list of 52 basic paramedical and allied medical service occupations was compiled and identified with specific job titles. Using these 52 titles, a questionnaire was developed which would enable respondents to complete entries pertaining to employment data at their respective agencies. Such data included full and part-time employees currently employed, current vacancies, projected replacements based on their history of turnover, and new hirings based upon their requirements to support any expansions of plant, services, or facilities. These questionnaires were then mailed for completion to those agencies who had made a favorable response to the initial request for participation.

The percentages of the final response to the questionnaire are listed in Table 1.

Table 1
SURVEY RESPONSE
MONTANA MEDICAL INSTITUTIONS AND INDIVIDUAL PRACTITIONERS

Type	Total No. In Montana	Survey Response %
HOSPITALS	73	41
NURSING HOMES*	79	39
MEDICAL CLINICS	43	18
PHYSICIANS**	555	4
DENTISTS**	346	8

*Does not include Boarding or Personal Care Homes.

**Survey questionnaires were not solicited from all physicians and dentists. Only a 10% representative sampling was attempted.

TABULATIONS
CURRENT POSITIONS

Upon receipt of the completed forms, the numbers of personnel employed in each designated occupational category along with the numbers of current vacancies were tabulated and totalled. In order to determine the total number of employees necessary for health-related operations throughout the entire state, determinations were made to assure that samplings in each of the major services (hospitals, clinics, nursing homes, et al.) were reasonably representative of all areas. The percentage of the samplings were then extended to 100% in all job categories and types of institutions to achieve state-wide total requirements.

In extending statistical samplings in this manner, some errors may be induced and compounded. For example, it might well develop that the totals for Licensed Practical Nurses or Radiological Technicians may be greater than the total numbers of such personnel licensed or registered in the state. Should such an apparent error be noted, it may be due to an overextended sampling. However, more probably it reflects that a number of unlicensed or unregistered personnel are currently filling such positions because of shortages of fully qualified applicants.

Totals of current positions are reflected in the three following tables: Table 2, covering Paramedical and Dental Occupations; Table 3, Administrative Services; and Table 4, Facility Services.

Table 2
CURRENT POSITIONS
Paramedical And Dental Services

OCCUPATIONAL TITLE *Designates Numerical Placement in Appendix A	Currently Employed		Current Vacancies		Total Current Positions
	Full Time	Part Time	Full Time	Part Time	
8* Cytotechnician	7	0	2	0	9
9 Dental Assistant	376	63	0	0	439
10 Dental Hygienist	38	13	13	0	64
11 Dental Laboratory Technician	38	13	0	13	64
14 EEG Technician	28	15	0	0	43
15 EKG Technician	62	16	0	0	78
19 Histological Technician	10	5	2	2	19
20 Home Health Aide	2	0	0	0	2
23 Inhalation Therapist	15	24	0	0	39
25 Laboratory Aide	88	12	5	2	107
26 Laboratory Technician	380	98	22	7	507
32 Medical Records Clerk	150	20	0	2	172
33 Medical Records Librarian	44	7	2	0	53
34 Medical Secretary	198	35	38	2	273
35 Medical Stenographer	17	7	5	0	29
36 Nurse, Licensed Practical	1472	289	91	33	1885
37 Nurse's Aide	3011	722	79	29	3841
38 Occupational Therapy Aide	7	12	3	5	27
40 Operating Room Technician	148	7	12	2	169
41 Orderly	194	42	23	0	259
42 Pharmacy Helper	29	22	0	0	51
43 Physical Therapy Aide	47	27	5	3	82
44 Psychiatric Aide	49	0	0	0	49
46 Radiological Technologist	162	33	5	5	205
52 Ward Clerk	183	32	15	7	237

Table 3
CURRENT POSITIONS
Administrative Services

OCCUPATIONAL TITLE *Designates Numerical Placement in Appendix A	Currently Employed		Current Vacancies		Total Current Positions
	Full Time	Part Time	Full Time	Part Time	
1* Accountant	46	12	2	0	60
2 Bookkeeper	343	25	2	2	372
3 Cashier	41	7	0	0	48
5 Computer Operator	7	7	0	0	14
7 Credit Manager	27	2	0	0	29
24 Insurance Clerk	179	16	0	0	195
39 Office Clerk	229	46	7	2	284
46 Receptionist	621	51	8	0	680
47 Secretary	283	15	6	0	304
48 Statistical Clerk	10	7	0	0	17
50 Stenographer	12	10	2	2	26
51 Switchboard Operator	88	66	0	0	154

Table 4
CURRENT POSITIONS
Facility Services

OCCUPATIONAL TITLE	*Designates Numerical Placement in Appendix A	Currently Employed		Current Vacancies		Total Current Positions
		Full Time	Part Time	Full Time	Part Time	
4*	Central Supply Aide	137	22	2	0	161
6	Cook	358	70	9	5	442
12	Dietary Aide	118	36	0	3	157
13	Dietary Clerk	100	39	0	0	139
16	Electronic Technician	10	0	0	0	10
17	Food Service Helper	737	232	10	5	984
18	Food Service Supervisor	64	13	2	0	79
21	Hospital Engineer	37	5	0	0	42
22	Housekeeper	501	48	10	3	562
27	Laundry Manager	39	7	2	0	48
28	Laundry Worker	352	90	5	0	447
29	Linen Room Attendant	65	10	0	0	75
30	Maid, Hospital, Nursing Home	434	44	3	2	483
31	Maintenance Man	308	47	10	0	365
49	Stationary Engineer	90	10	2	0	102

PROJECTED POSITIONS AND TRAINING NEEDS

This survey encompasses not only the current status of employment but also the future requirements of the number of personnel to be trained and employed during the next 5 years. Respondents were requested to project their estimates of replacements and new hirings. A "replacement" meant personnel to be hired to fill future vacancies of current positions based upon the institution's previous history on the rate of turnover. "New hiring" meant personnel projected to be hired to fill future position vacancies based upon 5 year plans for extensive expansions in plant, services, facilities, and anticipated patient loads. Once representative samplings were determined, they were extended to state-wide requirements by the method previously described to obtain the totals represented in Tables 5, 6, and 7. The number of personnel to be trained in the various job categories from the present through June 1973 may be found in the same tables. The number to be trained is the accumulated sum of current vacancies, replacements, and new hirings.

Table 5
PROJECTED POSITIONS AND TRAINING NEEDS
Paramedical And Dental Services

OCCUPATIONAL TITLE *Designates Numerical Placement in Appendix A	Total Current Positions	Hirings Projected Through June 1973		Projected for 1973	
		Replacements	New Hirings	Total Positions	No. To Be Trained
8* Cytotechnician	9	2	2	11	6
9 Dental Assistant	439	88	50	489	138
10 Dental Hygienist	64	25	0	64	38
11 Dental Laboratory Technician	64	0	0	64	13
14 EEG Technician	43	0	12	55	12
15 EKG Technician	78	5	7	85	12
19 Histological Technician	19	5	5	24	14
20 Home Health Aide	2	5	15	17	10
23 Inhalation Therapist	39	10	22	61	32
25 Laboratory Aide	107	28	32	139	67
26 Laboratory Technician	507	57	64	571	150
32 Medical Records Clerk	172	55	26	198	83
33 Medical Records Librarian	53	7	12	65	21
34 Medical Secretary	273	41	41	314	122
35 Medical Stenographer	29	0	0	29	5
36 Nurse, Licensed Practical	1885	275	295	2180	694
37 Nurse's Aide	3841	856	480	4321	1444
38 Occupational Therapy Aide	27	5	25	52	38
40 Operating Room Technician	169	32	32	201	78
41 Orderly	259	55	40	299	118
42 Pharmacy Helper	51	2	10	61	12
43 Physical Therapy Aide	82	25	39	121	72
44 Psychiatric Aide	49	5	10	59	15
45 Radiological Technologist	205	34	35	240	79
52 Ward Clerk	237	37	56	293	115

Table 6
PROJECTED POSITIONS AND TRAINING NEEDS
Administrative Services

OCCUPATIONAL TITLE *Designates Numerical Placement in Appendix A	Total Current Positions	Hirings Projected Through June 1973		Projected for 1973	
		Replacements	New Hirings	Total Positions	No. To Be Trained
1* Accountant	60	5	10	70	17
2 Bookkeeper	372	21	40	412	65
3 Cashier	48	12	7	55	19
5 Computer Operator	14	2	5	19	7
7 Credit Manager	29	5	7	36	12
24 Insurance Clerk	195	31	21	216	52
39 Office Clerk	284	50	17	301	76
46 Receptionist	680	182	86	766	276 3
47 Secretary	304	51	47	351	104
48 Statistical Clerk	17	0	10	27	10
50 Stenographer	26	2	0	26	6
51 Switchboard Operator	154	48	16	170	64

Table 7
PROJECTED POSITIONS AND TRAINING NEEDS
Facility Services

OCCUPATIONAL TITLE *Designates Numerical Placement in Appendix A	Total Current Positions	Hirings Projected Through June 1973		Projected for 1973	
		Replacements	New Hirings	Total Positions	No. To Be Trained
4* Central Supply Aide	161	27	22	183	51
6 Cook	442	68	57	499	139
12 Dietary Aide	157	41	46	203	90
13 Dietary Clerk	139	15	7	146	22
16 Electronic Technician	10	0	5	15	5
17 Food Service Helper	984	160	67	1051	242
18 Food Service Supervisor	79	12	12	91	26
21 Hospital Engineer	42	7	7	49	14
22 Housekeeper	562	63	84	646	160
27 Laundry Manager	48	5	10	58	17
28 Laundry Worker	447	62	57	504	124
29 Linen Room Attendant	75	2	5	80	7
30 Maid, Hospital, Nursing Home	483	74	61	544	140
31 Maintenance Man	365	52	42	407	104
49 Stationary Engineer	102	10	10	112	22

COMPARISON WITH OTHER SOURCES

While the needs expressed for replacements, new hirings, and personnel to be trained are cited as precise figures, they must be interpreted only in terms of relative magnitude. Generally, in the light of a number of factors, it appears that respondents have been overly conservative in their estimates as reflected in responses to queries on replacements and new hirings to man expansions planned. Both appear to be considerably below norms expressed in similar surveys accomplished by other states and national manpower requirements estimates published to support expansion planning.

To provide a means of comparison, Table 8 was prepared. The state of Idaho was selected because of regional proximity, similarity in cultures and facilities, and very close correlation with Montana on general population figures.

TABLE 8
PERCENTAGES OF INCREASE IN OCCUPATIONS LISTED IN THIS SURVEY COMPARED WITH DATA FROM OTHER SOURCES

OCCUPATION	National Figures %*	State of Idaho%**	State of Montana %***
Insurance Clerk	--	81	11
Laboratory Technician	60	26	13
Medical Stenographer	--	60	0
Nurse, Licensed Practical	42	35	16
Nurse's Aide	42	27	13
Orderlies	--	100+	16
Radiological Technologists	74	61	17
Ward Clerks	--	100	24

*Technology and Manpower in the Health Services Industry 1965 - 75, Manpower Research Bulletin #14, U. S. Department of Labor, May 1967

**Occupational Trends in Idaho Hospitals & Licensed Nursing Homes, Department of Employment, State of Idaho, April 1967

***Reflected in this Survey

DISCUSSION

The foregoing table indicates the degree of conservatism displayed by respondents in projecting data. Other factors are described below to enable planners a background from which to form their own deductions:

National estimates reveal capacities and facilities of hospitals and nursing homes will be increased approximately 33% by 1975. An Idaho survey revealed that overall employment in hospitals in that state should increase 30% by 1972; nursing home employment to be increased by 35%. In this Montana survey, 57% of the hospitals and 33% of the nursing homes responding indicated "extensive expansions" are planned within the next 5 years. Yet, estimates of new hirings fall short of the numbers necessary to support such expansions.

Estimates of replacements to support current positions likewise appear unrealistically low in practically all categories. Example: It may be noted that replacement estimates for Dental Laboratory Technicians, EEG Technicians, and Medical Stenographers, were submitted as "0". Consideration of only routine, normal attrition (deaths, prolonged illnesses, retirements, transfers, etc.) should have precluded null estimates. Further, certain other occupations, notably Orderlies, Aides, Office Clerks, and Stenographers, usually have very high turnover rates. Yet, estimates for these occupations submitted by respondents reflected abnormally low turnovers.

Employment in Montana has not reached significant levels in some of the more technical fields. Yet, current trends indicate that greatly increased demands will be forthcoming in such skills as Inhalation Therapy, Surgical, Laboratory, and EKG Technicians, and the like. In similar manner, expansions of hospitals and nursing homes should place greater demands for Aides in Home Health, Occupational and Physical Therapy, and other rapidly emerging occupations.

In view of these circumstances, it appears that employment possibilities in the medical-related fields are potentially much greater than might be inferred as a result of this study. In effect, it may be concluded that if Montana's current and future needs in the field are to be met, an increased number of trainees must be recruited and a considerable expansion of training facilities must be effected.

Expansions in the number of trainees and training facilities are not limited to the paramedical training programs listed in the Appendix, but should include entry training for the Administrative and Facility occupations as well. Such requirements are well adapted to comprehensive high school occupational training and post high school vocational-technical programs.

APPENDIX

A. TABLE OF MEDICAL SERVICE OCCUPATIONS

B. MONTANA TRAINING FACILITIES

APPENDIX A
MEDICAL SERVICE OCCUPATIONS

The following occupations were those utilized for investigation and tabulation in this survey. In each listing, the occupational title is followed by a concise job description, a summary of the training usually demanded for entry into the occupation, and the monthly salary range currently being paid from entry level through the highest salary reported. Salaries in a number of hospital positions are augmented by extra pay for personnel "on call."

State licensing is required in some occupations such as Licensed Practical Nurse and Stationary Engineer. Others are registered with their National Associations: Radiological Technologist, EKG Technician, etc.

1. ACCOUNTANT

Responsible for maintaining accurate records of income and expenses. Applies principles of accounting to install and maintain operation of general accounting systems. Provides records of assets, liabilities, and financial transactions. Audits contracts, orders, and vouchers and prepares reports. Much of the accounting process is now being handled by electronic data processing machines.

Although training may be obtained in business schools and community colleges, a bachelor's degree in accounting or a closely related field is increasingly demanded.

$550 - $1,000

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2. BOOKKEEPER

Maintains systematic up-to-date records on financial affairs, income and expense accounts, itemized billings for services rendered, balances, accounts receivable, etc. In smaller institutions and offices, initiates correspondence and maintains files. In medical facilities often utilized as Posting, Admission and Discharge Reports Clerks, and the like. Position requires the use of adding machine, calculators, etc.

Minimum requirements are typically for high school graduates with backgrounds in business arithmetic and office machines.

$280 - $700

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3. CASHIER

The primary responsibility of the cashier is the receipt and disbursement of payments for services rendered. Knowledge of accounting and billing methods is necessary to aid in explaining charges. Since the public is met continually in this position, a cashier must enjoy dealing with people, be well-groomed and have a pleasing personality.

A high school education and on-the-job training are usually sufficient qualifications for this position.

$275 - $600

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4. CENTRAL SUPPLY AIDE

Cleans, sterilizes, and assembles hospital equipment, supplies, and instruments according to prescribed procedures and techniques. Scrubs, washes, and sterilizes instruments and equipment. Prepares packs of supplies and instruments. Sharpens hypodermic needles and matches syringe barrels and plungers according to size, trade name, or serial number. Examines rubber gloves for leaks or deterioration and patches holes. Powders and wraps gloves in paper or cloth preparatory to sterilizing. Stores prepared articles and supplies in designated areas. Fills requisitions, writes charges, and inventories supplies.

High school graduates augmented by on-the-job training are normal sources.

$225 - $480

* * * * *

5. COMPUTER OPERATOR

Monitors and controls electronic computer and allied equipment to process data. Selects and loads input and output units with tapes, punch cards, print-out forms; manipulates switches for operating runs, observes for error messages, stoppages, faulty output; types alternate commands into console in accordance with instructions. Clears units at end of runs and reviews schedules for assignments. Wires control panels of peripheral equipment.

Requires highly specialized, post-high school technical training.

$430 - $500

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6. COOK

Interprets menus and prepares foodstuffs. Adjusts thermostats to regulate temperature of ovens, broilers, grills, roasters, and steam kettles. Measures and mixes ingredients according to recipe, using a variety of kitchen utensils and equipment such as blenders, mixers, grinders, slicers, and tenderizers. Prepares, seasons, and bakes roasts, broils, steams, and cooks soups, meats, vegetables, desserts, and other foodstuffs. Adds seasoning to food during mixing or cooking according to personal judgement and experience, or under direction of the dietician. Carves meats and apportions food, adding gravies, sauces, and garnishes to servings.

While cooks at many smaller institutions developed their skills as kitchen helpers, larger facilities are increasingly demanding post-high school training in food handling, preparation, sanitation, etc. Vocational-Technical Schools are becoming prime training sources.

$205 - $550

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7. CREDIT MANAGER

Verifies credit standings of clients from information in files or phone and mail contacts with other agencies. Determines the amount of credit which will be extended by gauging risk factors, and authorizes extent of charges to individual accounts. Reviews ledgers for billings. Monitors accounts for currency of payment and initiates appropriate action to clear delinquent accounts.

Specialized post-high school training is increasingly demanded.

$740 - $1,000

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8. CYTOTECHNICIAN

Stains, mounts, and studies cells of the human body to determine pathological condition. Examines specimens under microscope to aid in the diagnosis of the nature and extent of disease or cellular damage. Executes a variety of laboratory tests and analyses to confirm findings. Works under the supervision of a

Pathologist or Medical Technologist.

Very highly specialized post-high school training in a number of specific, scientific courses of study is required.

$400 - $510

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9. DENTAL ASSISTANT (Chairside)

Completes informational and dental treatment records. Prepares patient for dental treatment. Arranges instruments, materials, and medications; assists dentists during dental operations using suction, sprays, retractors, etc. Prepares amalgams, cements, solutions; sterilizes and stores instruments and maintains aseptic conditions through sterile techniques. Performs routine maintenance on equipment and instruments. May expose and process X-rays, perform administrative functions, explain post operative care and oral hygiene to patients, and the like. May process restorations and dentures using dental investments, electric furnaces, casting machines, curing tanks, and dental lathes.

Graduation from high school and on-the-job training are essential. Completion of post-high school technical courses is increasingly demanded.

$380 - $550

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10. DENTAL HYGIENIST

Using special dental instruments, cleans and polishes teeth by removing stains and deposits. Charts conditions of decay and disease of teeth for diagnosis by the dentist. Provides dental health education including mouth care and proper diet. May take and develop X-rays, mix filling compounds, prepare solutions, administer prescribed medicaments, sterilize instruments, and act as chairside assistant to the dentist.

Completion of a 2 year dental hygiene program at an accredited school is usually sufficient educational background for entry.

$400 - $600

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11. DENTAL LABORATORY TECHNICIAN

Using impressions of patient's mouth, manufactures artificial dentures, teeth, crowns, bridges, and other dental and orthodontal appliances. Such work includes metal castings for dentures, polishing and finishing dentures, constructing metal or porcelain crowns or inlays for partially destroyed teeth, making gold and other bridges and appliances to correct abnormalities. Uses small handtools, special electric lathes and drills, high-heat furnaces, and other specialized laboratory equipment.

Currently, no minimum educational requirements prevail; employers consider previous work experience which includes 3 to 4 years of on-the-job training. However, formal post-high school training in 1 to 2 year programs of dental laboratory technology is fast becoming the best entry source.

$560 - $850

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12. DIETARY AIDE

Prepares trays for service by placement of flatware, sugar, cream, beverages, butter, etc. Apportions food servings according to diet lists, complying with specific diet instructions, using cart to deliver and serve food to patients. Collects dishes and flatware after use and returns to kitchen. Assists in washing dishes and cleans kitchen work areas.

No specific educational requirements.

$185 - $300

* * * * *

13. DIETARY CLERK

Compiles dietary information for use by kitchen personnel in the preparation of foods. Examines diet orders received and tallies portions and foods for each type of diet such as general diet, gastric diet, and light diet. Marks amount of food on master menu to inform kitchen personnel of food requirements. Processes new diets and changes as required.

Requires at least a high school education with background in home economics. Post-high school training is desirable.

$260 - $550

* * * * *

14. EEG TECHNICIAN

Measures impulse frequencies and differences in electrical potential between various portions of the brain, using an electroencephalograph that records data as a series of irregular lines on a continuous graph for use by a physician in diagnosing brain disorders. Instructs patients in procedures, attaches electrodes to the patient's head, and operates equipment to obtain graphic readings. Observes patient's behavior, making pertinent notes on graphs. Notes any malfunctions of equipment and makes minor adjustments and repairs.

High school education, supplemented by on-the-job training, is a minimum. Licensed Practical Nurses are frequently utilized.

$430 - $650

* * * * *

15. EKG TECHNICIAN

Records electromotive variances in action of the heart muscle, using an eletrocardiograph machine to provide data for diagnosis of heart ailments. Attaches electrodes to special areas of the patient's body.

High school education is a minimum, supplemented by on-the-job training. Licensed Practical Nurses are frequently utilized.

$250 - $650

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16. ELECTRONIC TECHNICIAN

Performs repairs and general maintenance on a variety of institutional communications equipment. Such equipment includes intercom, radio, and T.V. systems. May also be required to repair and service various items of electric office machines, appliances, and equipment.

Two years of post-high school technical training in basic electronics, instruments, and repair techniques.

$300 - $450

* * * * *

17. FOOD SERVICE HELPER

Assists the cook in the preparation and cooking of various foodstuffs. Performs various duties to maintain kitchen work areas, equipment, and utensils in a clean and orderly condition. Washes dishes and flatware or utilizes dishwashing machine. Cleans work tables, walls, refrigerators, etc. Segregates trash and garbage to designated containers.

No specific educational requirements.

$185 - $360

* * * * *

18. FOOD SERVICE SUPERVISOR

Trains and supervises employees in preparation and service of food in hospitals, nursing homes, and other institutions. Maintains cleanliness. Instructs workers and maintains work-schedules. Supervises the serving of meals. Requisitions basic foodstuffs and supplies. Keeps records of cost of meals served and hours worked by employees. May interview and select new employees.

Post-high school education with emphasis in personnel, cost accounting, procurement, and management is highly desirable.

$500 - $900

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19. HISTOLOGICAL TECHNICIAN

Prepares slides from tissue specimens and performs various tests and microscopic inspections for subsequent diagnosis and treatment by the medical staff. Assists in maintaining routine laboratory procedures and practices.

Highly specialized, technical, post-high school courses are required.

$370 - $510

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20. HOME HEALTH AIDE

Home Health Aides are employed by institutions wherever these agencies provide Home Health service. The Home Health Aide is assigned to give personal care under the supervision and guidance of professional nurses. Personal care includes hygiene and activities of daily living.

Post-high school training in psychology, sociology, and hygiene, desirable. Licensed Practical Nurses are frequently sources for this occupation.

$250 - $580

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21. HOSPITAL ENGINEER

Supervises the operations of the institution's various engineering and maintenance personnel; plumbers, carpenters, electricians, etc. Maintains cost/control data and records for overall effectiveness. Provides drawings, estimates, and recommendations for more sizeable repairs and/or structural alterations.

Source is usually a selected individual who has demonstrated abilities in supervision and materials management as well as proficiency in building maintenance skills.

$435 - $1,300

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22. HOUSEKEEPER

Supervises work activities of cleaning personnel to assure clean, orderly, and attractive rooms in hospitals and other institutions. Assigns workers their duties and inspects work for conformance to prescribed standards of cleanliness. Inventories stock to insure adequate supplies. Investigates complaints regarding housekeeping service and equipment and takes corrective action.

No prescribed educational requirements. Individual is usually selected for demonstrated abilities in management and supervision of other employees.

$215 - $600

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23. INHALATION THERAPIST

Treats patients in a hospital or a home for lack of oxygen in the tissues, using oxygen and various drugs prescribed by a physician. Applies positive pressure breathing, using equipment such as respirators, resuscitators, humidifiers, nebulizers, and aerosols. Administers gases and drugs, using oxygen tent, hood, mask, or other partial or total enclosures with or without a regulator or other mechanical devices. May be required to transport heavy equipment such as oxygen cylinders.

Formerly, this occupation was served by nurses or personnel trained on-the-job. Currently, demands are increasing for a minimum of 9 months of hospital schooling in courses of theoretical instruction and supervised practice.

$240 - $600

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24. INSURANCE CLERK

Verifies hospitalization insurance coverage and computes benefits for patients. Completes insurance assignment forms with appropriate data. Telephones, writes, or wires insurance companies to verify patient's coverage and to obtain information concerning the extent of benefits. Computes total hospital bills indicating amounts to be paid by the insurance company and by the patient. Answers questions pertaining to statements and insurance coverage. Prepares forms outlining medical expenses for governmental welfare and other agencies paying bills of specified patients. Telephones or writes companies to assure settlement of unpaid insurance claims. Must maintain own research and interpretations on insurance-related matters.

High school graduates with business and clerical training are normal sources.

$275 - $500

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25. LABORATORY AIDE

Performs relatively difficult cleaning tasks involving mixing various cleaning solutions and acids according to specifications, as well as the performance of routine washing and cleaning of laboratory glassware and equipment. May be called on to assist in other laboratory functions such as cutting tissues and staining slides.

High school graduates augmented by on-the-job training are most common sources.

$230 - $450

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26. LABORATORY TECHNICIAN

Performs routine tests in medical laboratories for use in treatment and diagnosis of disease. Prepares tissue samples for pathologists. Takes blood samples and prepares vaccines. Executes such laboratory tests as urine analysis and blood counts, using microscopes, micrometers, and similar instruments. Makes quantitative and qualitative chemical and biological analyses of specimens under the supervision of Medical Technologists or Pathologists.

Two years of post-high school education in technical, certified, courses of training are increasingly demanded as entry requirements.

$375 - $775

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27. LAUNDRY MANAGER

Supervises and coordinates activities of employees engaged in receiving, marking, washing, and ironing clothes and linen. Investigates and resolves complaints. Maintains effective operation along with keeping current on new or improved methods and equipment. Maintains records on employees, work accomplished, and accounting for finished work and work schedules. Procures and maintains stocks of supplies.

High school education and prior laundry experience qualify entry, with selection made on abilities in management and supervision of other employees.

$345 - $665

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28. LAUNDRY WORKER

Sorts articles on work-tables or floor baskets to separate special washes. Washes, dries, and irons articles, using equipment such as hand irons, mangles, and washing and drying machines. Assembles and wraps or bags laundered articles for delivery to the various departments.

No specific educational requirements.

$215 - $425

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29. LINEN ROOM ATTENDANT

Stores, issues, and inventories linens and maintains adequate supplies. Segregates, counts, and records number of items of soiled linen; places linen in containers for transmittal to laundry. Examines laundered items to insure cleanliness and serviceability.

No specific educational requirements.

$235 - $305

* * * * *

30. MAID, HOSPITAL, NURSING HOME

Cleans wards, rooms, baths, laboratories, offices and halls. Mops and waxes floors, cleans sills, woodwork, and furniture. Scours and polishes bathtubs, sinks and laboratory equipment. Polishes brass and glass panels in doors and partitions. Empties ashtrays and waste baskets. Washes bed frames, brushes mattresses, and remakes beds. Keeps utility and storage rooms in a neat and orderly condition. Distributes laundered articles and linens to wards. Maids in hospitals are more closely governed in aseptic techniques.

No specific educational requirements.

$215 - $370

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31. MAINTENANCE MAN

Repairs and maintains building, using hand and power tools. Installs and repairs electrical switches, fixtures, and wiring. Paints structures, repairs woodwork, plaster, plumbing fixtures, and lays brick. Builds cabinets, cupboards, and outbuildings. Category may also include yard work in maintaining lawn and grounds.

Requires experience in the particular skill for which employed -- electrician, carpenter, plumber, etc.

$290 - $645

* * * * *

32. MEDICAL RECORDS CLERK

Classifies medical records of patients and compiles statistics for use in reports and surveys. Keeps daily statistical record information on admissions, deaths, births, and types of treatment rendered, using records such as admission and discharge slips and medical charts.

Requires at least a high school education with business and clerical background. Post-high school training is increasingly demanded.

$235 - $390

* * * * *

33. MEDICAL RECORDS LIBRARIAN

Compiles and maintains medical records of hospital and clinical patients. Reviews clinical records for completeness. Contacts medical personnel to obtain missing data. Codes indices and files records of diagnosis, disease, and treatments. Compiles statistics such as reports on admissions, births, deaths, transfers, and discharges. Releases medical information to staff and authorized governmental agencies, insurance companies, hospitals, physicians, and medical information and research centers.

Requires at least a high school education with a business and clerical background. Post-high school training is increasingly demanded.

$345 - $550

* * * * *

34. MEDICAL SECRETARY

Takes technical medical dictation and transcribes from notes or mechanical dictating equipment. May write her own letters on routine medical matters. Must have thorough knowledge of and familiarity with the uses and meanings of medical terms and phrases.

Graduation from high school and completion of special training in medical terminology is required.

$345 - $550

* * * * *

35. MEDICAL STENOGRAPHER

Takes shorthand dictation of correspondence, reports, meetings, and other matters, and transcribes dictated material, using typewriter. Performs a variety of related clerical duties. Work requires the knowledge of and familiarity with the use and meanings of medical terms and phrases.

Graduation from high school and completion of special training in medical terminology is required.

$280 - $550

* * * * *

36. NURSE, LICENSED, PRACTICAL

Performs assigned nursing duties in caring for patients in hospitals or homes. Prepares patients and assists physician with examinations and treatments. Prepares and applies dressings, compresses, and packs. Takes patient's pulse, temperature, and blood pressure; recording, when authorized, on patient's charts. Pours, measures, and/or counts out medicines and administers precribed dosages to patients. Prepares patient for surgery or other treatment. Sets up equipment in operating and delivery rooms. Hands instruments and supplies to surgeon, obstetrician, or professional nurse during surgery or delivery.

Requires special post-high school training in certified courses of study prior to obtaining state license.

$265 - $650

* * * * *

37. NURSE'S AIDE

Assists professional nursing staff in hospitals and other institutions by performing routine or lesser-skilled tasks in the care of patients. Bathes and dresses patients. Answers call bells, makes beds, and serves food. Assists patients in walking. Gives alcohol rubs and performs other services. Cleans rooms and equipment.

On-the-job training is required. Post-high school courses of study are desirable and increasingly demanded.

$205 - $550

* * * * *

38. OCCUPATIONAL THERAPY AIDE

Assists occupational therapist in administering medically-oriented occupational programs to aid in rehabilitating patients in hospitals and similar institutions. Instructs patients in manual and creative arts, games, crafts, and other activities. Reports to and consults with the occupational therapist regarding patient's performance. Prepares and lays out work materials and supplies and assists in maintenance of equipment.

On-the-job training is required. Post-high school courses of study are highly desirable and increasingly demanded.

$290 - $325

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39. OFFICE CLERK

Performs a variety of clerical duties utilizing knowledge of systems or procedures; copies, files, and compiles data, records, and reports. Tabulates and posts data. Computes wages, taxes, payments, billings, receipts, statistical records, etc. Opens and routes mail and circularizes material. May give information, interview, adjust complaints, purchase supplies, prepare payrolls, etc. Frequently designated by field of activity: posting clerk, admission and discharge clerk, bookkeeping clerk, and the like. Operates office machines such as typewriter, and adding, calculating, and duplicating machines.

High school graduation, with backgrounds in business, clerical, or bookkeeping is a minimum qualification. Post-high school training in specialized fields is increasingly demanded.

$225 - $550

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40. OPERATING ROOM TECHNICIAN

Performs a variety of tasks in the operating room to assist professional nurse and medical staff. Washes, shaves, and sterilizes operative region of patient in preparation for operations. Places equipment and supplies in operating room according to type of operation and surgeon's directions. Arranges instruments specified. Maintains specified supplies of such fluids as blood plasma, saline, and glucose for use during operation. Adjusts lights and surgical equipment. Places contaminated instruments and supplies in receptacles to prevent spread of infection. Labels surgical specimens for laboratory analysis. Cleans operating room and washes and sterilizes contaminated instruments and equipment following prescribed aseptic procedures. May take sponge, needle, and instrument counts, assists in administering plasma, glucose or other intravenous transfusions and injections; hands specified instruments and supplies to the surgeon during operations, holding retractors, clamps, and cutting sutures, as directed.

Specialized training is essential. Frequently, Licensed Practical Nurses are utilized.

$205 - $600

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41. ORDERLY

Assists professional nursing staff by performing some of the heavier duties. Lifts patients to and from beds, wheels patients to and from the operating room, bathes, shaves, and dresses patients. Assists in serving meals, cleaning, and odd jobs. Answers call bells, makes beds, gives alcohol rubs. May give catheterization enemas, collect specimens, prepare and apply dressings, compresses, packs, and set up oxygen tents and other equipment.

High school graduates augmented by on-the-job training are common sources.

$205 - $410

* * * * *

42. PHARMACY HELPER

Mixes pharmaceutical preparations under direction and supervision of the pharmacist. Issues medicines, labels and stores supplies, cleans equipment and work areas in the pharmacy. Labels drugs, chemicals, and pharmaceutical preparations. Prepares inventories and orders supplies to maintain levels of stock. Unpacks and stores supplies. Washes and sterilizes glassware.

On-the-job training for high school graduates with science backgrounds essential. Post-high school training in particular courses of study is increasingly demanded.

$225 - $500

43. PHYSICAL THERAPY AIDE

Prepares patient for treatment by the Physical Therapist. Assists patients in dressing and undressing and moving about during therapy. Sets up and assembles such equipment as hydrotherapy tanks and vibrators. Places patients in position. Times length of treatment. Changes linen on beds and treatment tables and cleans work area. May assist in fitting patients with corsets, braces and splints.

High school graduates augmented by on-the-job training are common sources.

$225 - $500

* * * * *

44. PSYCHIATRIC AIDE

Performs duties similar to Orderlies in assisting mentally ill patients. Works under the supervision and direction of nursing and medical staff.

High school and on-the-job training is mandatory. Post-high school courses in particular cources of study are increasingly demanded.

$285 - $395

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45. RADIOLOGICAL TECHNOLOGIST

Applies roentgen rays and radioactive substances for diagnostic and therapeutic purposes. Positions patient, adjusts immobilization devices, and affixes lead plates to protect unaffected areas. Administers drugs and chemicals to render internal organs more opaque. Adjusts switches regulating length and intensity of exposure. Takes X-ray photographs of various portions of the body to assist medical personnel in detection of foreign bodies and diagnosis of diseases and injuries. Develops film in accordance with established techniques. Assists in treating disease or affected areas of the body by exposing the area to specified concentration of X-rays for prescribed lengths of time. Prepares reports and maintains records of services rendered. Makes minor adjustments to X-ray equipment.

Requires at least 2 years of prescribed study under registered technologists before application may be made for testing and registration under national standards.

$400 - $650

* * * * *

46. RECEPTIONIST

Receives clients, ascertains their wants, and directs them accordingly. Conducts interviews and records pertinent information. Explains rules and regulations, types appropriate records, routes mail, maintains appointment schedules, and may be assigned a variety of other clerical duties.

High school graduates with clerical backgrounds are preferred.

$260 - $500

* * * * *

47. SECRETARY

Takes various forms of dictation (correspondence, memos, staff meetings, etc.) and transcribes notes on typewriter. Composes, types, and transmits routine correspondence. Locates and attaches appropriate files to correspondence. Performs a variety of clerical functions and otherwise relieves officials of administrative business details.

Post-high school training in secretarial functions is usually essential.

$315 - $600

* * * * *

48. STATISTICAL CLERK

Compiles and tabulates statistical information for use in a variety of forms and studies. Works from source material such as tests, personnel records, surveys, questionnaires, and numerous forms of clinical data. Assembles and classifies statistics, verifying the authenticity of material, and following prescribed procedures. Operates adding machines and calculators to compute statistical formulas.

Usually requires post-high school study in general application and interpretation of statistical data.

$300 - $500

* * * * *

49. STATIONARY ENGINEER

Operates and maintains institution's large-scale, fixed-location, equipment, boilers, heating plant, power generators, etc. Performs preventative maintenance functions on heavy installations and associated equipment.

Requires specific technical training and qualification testing before issuance of a state license.

$435 - $1,050

* * * * *

50. STENOGRAPHER

Takes dictation on correspondence, reports, and other matters and transcribes dictated material, using typewriter. Performs a variety of other clerical duties; files, compiles reports records data, etc.

High school graduates with stenographic and clerical background are common sources. Usually requires additional post-high school stenographic training.

$260 - $500

* * * * *

51. SWITCHBOARD OPERATOR

Operates switchboard to relay incoming, outgoing, and interoffice calls. Manipulates switch keys to make connections and relay calls on switchboard. Uses jacks mounted on switchboard for cord type equipment. May perform related clerical duties.

High school graduates augmented by on-the-job training are common sources.

$260 - $490

* * * * *

52. WARD CLERK

Prepares and compiles records in hospital nursing units such as obstetrics, pediatrics, or surgery. Records name of patient, address, and name of attending physician to prepare medical records of patient. Copies information as to patient's temperature, pulse rate and blood pressure from nurses' records on the patient's medical records. Records diet instructions. Keeps file of medical records on patients in unit. Prepares notice of patient's discharge to inform business office. Requisitions supplies designated by nursing staff. Answers telephone and relays messages to staff and patients. Directs visitors to patient's rooms. Distributes mail, newspapers, and flowers to patients.

On-the-job training is required. Post-high school training is increasingly demanded.

$275 - $550

APPENDIX B
MONTANA TRAINING FACILITIES*

NURSE, LICENSED PRACTICAL

City	Facility	Educational Source
Billings	Deaconess Hospital	City Manpower Development Act
Billings	St. Vincents Hospital	City Manpower Development Act
Bozeman	Deaconess Hospital	Bozeman Public Schools
Butte	St. James Community Hospital	St. James Community Hospital
Butte	Silver Bow General Hospital	Anaconda Manpower Devel. Act.
Great Falls	Columbus Hospital	Great Falls Public Schools
Havre	Kennedy Deaconess Hospital	Kennedy Deaconess Hospital
Lewistown	St. Josephs Hospital	St. Josephs Hospital
Missoula	Missoula Community Hospital	Missoula County High School
Missoula	NPBA Hospital	NPBA Hospital
Missoula	St. Patricks Hospital	St. Patricks Hospital

NURSE, AIDE

Anaconda	St. Anns Hospital	St. Anns Hospital
Billings	St. Vincents Hospital	St. Vincents Hospital
Bozeman	Bozeman Deaconess Hospital	Public School Adult Education
Butte	Silver Bow General Hospital	Silver Bow General Hospital
Butte	St. James Community Hospital	St. James Community Hospital
Havre	Sacred Heart Hospital	Sacred Heart Hospital
Hamilton	Marcus Daly Memorial Hospital	Public School Adult Education
Helena	St. Johns Hospital	St. Johns Hospital
Helena	St. Peters Hospital	St. Peters Hospital
Missoula	St. Patricks Hospital	St. Patricks Hospital
Shelby	Toole County Hospital	Toole County Hospital

INHALATION THERAPY

Helena	St. Peters Hospital	St. Peters Hospital

MEDICAL SECRETARY

Billings	Deaconess Hospital	Billings Business College
Butte	St. James Community Hospital	Butte Business College
Havre	---	Northern Montana College
Missoula	---	Modern Business College

WARD SECRETARY

Butte	St. James Community Hospital	St. James Community Hospital
Helena	St. Peters Hospital	St. Peters Hospital

SURGICAL TECHNICIAN

Butte	St. James Community Hospital	St. James Community Hospital
Helena	St. Peters Hospital	St. Peters Hospital

* Adapted from Careers in Hospitals, Montana Hospital Association, 1967

X-RAY TECHNICIAN

Billings	Deaconess Hospital	Deaconess Hospital
Billings	St. Vincents Hospital	St. Vincents Hospital
Butte	St. James Community Hospital	St. James Community Hospital
Great Falls	Columbus Hospital	Columbus Hospital
Great Falls	Deaconess Hospital	Montana Deaconess Hospital
Libby	St. Johns Lutheran Hospital	St. Johns Lutheran Hospital
Missoula	St. Patricks Hospital	St. Patricks Hospital

VT 007 680
Teacher Educator Conference Report (Casa Grande, Arizona, November 7-8, 1968).

Arizona Occupational Research Coordinating Unit, Phoenix
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Nov68 29p.

*CONFERENCE REPORTS; *VOCATIONAL EDUCATION; TEACHER CERTIFICATION; *TEACHER EDUCATION; *RESEARCH UTILIZATION; EDUCATIONAL LEGISLATION; EDUCATIONAL TRENDS; DATA COLLECTION; RESEARCH COORDINATING UNITS; EDUCATIONAL RESEARCH
*TEACHER EDUCATOR CONFERENCE, CASA GRANDE, ARIZONA, NOVEMBER 7-8, 1968

The purpose of the conference was to develop a system for timely and appropriate availability of research results; to acquaint teacher educators and state personnel with the research materials now available, and with those that will be available; to explain the research utilization system developed by the Research Coordinating Unit; and to obtain suggestions for improving the system. Topics covered include legislation, patterns in teacher education, research utilization, certification, and data gathering. (CH)

VT007680

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RESEARCH UTILIZATION

REPORT OF A CONFERENCE

SPONSORED BY

ARIZONA
RCU

VT007680

FOR TEACHER EDUCATORS

Teacher Educator Conference

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Francisco Grande Motel
Casa Grande, Arizona
November 7-8, 1968

Sponsored by
Arizona Research Coordinating Unit

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INTRODUCTION

The first state-wide Teacher Educator Conference in Arizona was held Thursday, November 7 and 8, 1968, at the Francisco Grande Motel, Casa Grande, Arizona. The Conference was sponsored entirely by the RCU Discretionary Award Fund, a portion of 4(C) funds given to each RCU this year for local and state research activities.

Attending the Conference were the Associate Superintendent of Public Instruction for Vocational Education, assistant director, department supervisors, county coordinators, teacher educators from the universities, Dr. W. Patrick Loyd of the USOE Regional Office, Director of the RCU, and RCU staff members.

The purpose of the Conference was to develop a system for delivering research results to the right people at the right time and place; to aquaint teacher educators and state personnel with the research materials now available and those that will be available; to explain the research utilization system that has been developed by the RCU; and to obtain ideas and suggestions for improving this system. It was also hoped the Conference would provide the opportunity for exchange of ideas and information between teacher educators and state personnel, allow an examination of the new Vocational Education Amendments of 1968, and provide information on the new data processing enrollment system introduced this year by the RCU.

FIRST SESSION

An Overview of the New Vocational Education Legislation

Mr. J.R. Cullison, Associate Superintendent of Public Instruction for Vocational Education, presented a brief description of some of the changes to be expected from the 14 new Vocational Education Amendments of 1968 and their effect on Vocational Education in Arizona.

At present states are held responsible for only two basic needs -- training and placing. They are not required to ascertain actual manpower needs nor to match training opportunities with these needs. The new act, however, broadens and redefines the state responsibilities. States will now be required to show not only the number trained and placed but also what is happening to the deliquents and dropouts in their schools; the effect their training is producing in the pattern of living of trainees; and how special needs are being met. In other words, Vocational Education must now give attention not only to individuals but to the broad program and its effects as well.

Vocational Education in Arizona is unique in that there is a statewide system of high schools and junior colleges but no statewide system of vocational school. Our high schools and junior colleges must be comprehensive in their Voc Ed programs, and every effort is being made to expand and improve their facilities and programs.

There is today a definite inbalance between manpower needs and training programs in Arizona and projections show that by 1975 there will be a deficit of some 116,000 trained workers. Steps are being taken to adjust this inbalance but the big question is -- are they sufficient?

Last year Arizona high schools showed an enrollment of 30,000 in Vocational Education yet this represents only 22% of the total school enrollment. It would require an eighty percent Voc Ed enrollment to balance our manpower needs. In the same period 20,000 students graduated from high schools in the state. Sixty percent reportedly went on to college; forty percent apparently entered the working force. Of these forty percent, how many had salable skills?

At the junior college level we now have Junior College Districts in seven of our fourteen counties and will have more in operation by the end of 1968. But again our needs far exceed our facilities. As an example, the new Navajo College scheduled to open in January of 1969 with an expected enrollment of 300 students, has already received over 5,000 aplications. But even more disturbing than the lack of facilities, is the dropout picture. Sophomore enrollment in Arizona junior colleges last year was only twenty percent of the freshman enrollment. While increased freshman enrollments may account for part of this, it does not account for all. We must know why we are losing these students and what is happening to them.

By 1977, Arizona junior colleges will have 50,000 graduates. State high schools will be graduating 30,000. There must be facilities and teaching staffs to meet their needs.

Happily the 1968 amendments not only demand more but also provide more money for Vocational Education. The new legislation almost triples the present appropriation in Arizona. When matched with state funds, Arizona will have between four and twelve million dollars under the new amendments. But to qualify, there are deadlines to be met. The USOE expects to complete the rules and regulations by February 1. States must complete their model plan by February 15 and submit it to the USOE by February 30. In addition, a State Advisory Committee must be appointed ninety days before the legislation becomes effective on July 1. However, the council cannot be appointed until the state plan is completed. This council will be composed of 17 members appointed by the Governor from all occupational groups. It will serve as a continuing evaluative and advisory group at the state level. A similar council will be appointed by the President to function at a national level.

In addition to the deadlines required for instigating the new program, more detailed planning will be required. Long range projects and plans on a three to five year basis must be formed plus annual one year plans. The one year plan will be expected to include the recommendations of the State Advisory Council.

Copies of the amendments were distributed to members of the Conference and some of the highlights of the legislative history of the bill were presented by Dr. Arthur Lee, Director of the RCU.

Patterns for Teacher Education in Arizona

Open discussion generated a spontaneous addition to the scheduled agenda, a "brain storming" of teacher education. With the aid of a blackboard and Dr. John Glenn, the following twenty-seven suggestions were offered for improvement of teacher education.

1. Provide senior students planning to teach with visits to some of the better vocational-technical programs presently in operation in Arizona schools. Include type of counseling offered in these programs.
2. See that undergraduates get practical experience with disadvantaged families at personal level and at school level by visits to homes and schools in disadvantaged areas.
3. Be sure teachers and counselors have thorough understanding of manpower needs in Arizona.
4. Develop "people-oriented" teachers.
5. Establish a long range master plan for vocational education in Arizona.
6. Correlate general education and vocational education.
7. Identify the common core of vocational education.
8. Assign a supervisor of vocational teachers to be responsible for and to all services in Voc Ed, thus helping to correlate the various disciplines.
9. Require a skill refresher course for teachers at given periods of time so they will remain up to date on methods and advances in their area.
10. Investigate the possibility of using programmed instruction.
11. Establish a state teacher educator organization.
12. Provide clinical supervisors for beginning vocational education teachers.
13. Establish a teacher selection and recruitment scheme to provide more and better vocational education teachers.
14. Explore new teacher education approaches through research, personal contacts with other institutions.
15. Develop better training programs for adult and evening teachers.
16. Develop training programs for vocational education administrators; e.i. special courses at undergraduate and graduate level in Voc Ed administration.
17. Seek ways and means of providing more individual instruction for Voc Ed students.
18. Establish teacher consultant services where teachers can obtain help and information when needed.

19. Establish continual re-evaluation of certification requirements to improve quality of teachers.

20. Establish a center or service that will help teachers keep abreast of new educational techniques.

21. Establish a curriculum center for teacher educators where they can get help, information, etc., on new curriculum ideas and where the various disciplines can be examined for overlapping.

22. Develop a cluster concept for vocational teacher education.

23. Establish a program to upgrade teacher educators.

24. Explore "useful" and "gainful" objectives. Is too much emphasis being placed on "useful" at the expense of "gainful" at the university level?

25. Clarify responsibilities in overlapping service areas.

26. Clarify responsibilities for follow-up and evaluation of vocational education and vocational education teachers.

27. Change back of present enrollment card to ask and answer questions of interest to teacher educators.

SECOND SESSION

Research Utilization

Purpose: The primary purpose of this session of the Conference was to increase teacher educators' knowledge of research and research utilization and to seek the advice of teacher educators on the best method of distribution of these research materials.

Pre-Conference Quiz: Questionnaires were distributed to the participants to identify levels of knowledge of research and research utilization and to seek the advice of teacher educators on the best method of distribution of these research materials.

Pre-Conference Quiz: Questionnaires were distributed to the participants to identify levels of knowledge of research, location of materials, and utilization. It was requested that state personnel who had previously answered the questionnaire refrain from participation. The responses of these nineteen participants indicated that in knowledge of research all had read or examined several reports during the past year. The percentages having read these research reports and the types read are as follows:

95%	Curriculum Research
84%	Follow-up of Program Effectiveness
84%	Educational Methods
79%	Program Development
68%	Manpower Research
68%	Program Evaluation
63%	Motivational or Career Selection Research
37%	Cost Benefit Research

Eleven of the Conference participants have read or examined more than one research report of the same category. In the past year members of the Conference had collectively read or examined at least 124 research reports -- approximately six and one-half reports per person. Seventy-four percent were able to identify the research read. Thirty-two percent identified at least one report published outside of Arizona which they had read.

Over half of the teacher educators had requested research services from the State Department of Vocational Education or from university libraries during the past year. Fewer than one-fourth had asked the RCU for research. About 50% had gone directly to ERIC for desired information. Thirty percent had requested research services from the State Department of Public Instruction, and only two had used public school libraries.

Three-fourths of the Conference participants knew that the RCU has a complete set of AIM and ARM. Two-thirds knew the RCU had the entire collection of ERIC microfiche. Sixty-seven percent knew the RCU had the Ohio State Center's Review and Synthesis. One-half knew what is in AIM and ARM, but an equal number did not realize that AIM and ARM do not contain research reviews. Seventy-five percent knew the kinds and extent of research materials contained in the RCU library. Over half knew the extent of the RCU computer cataloguing of these materials.

Fifty-two percent of the participants had personal knowledge of the adoption of a new curriculum program, modification or an existing curriculum, field test, pilot or demonstration project, or other action taken as a direct result of research reports or projects. Only three persons knew of vocational research being utilized by agencies or institutions in Arizona other than schools.

Less than one-fourth of the participants had personally given research reports to teachers or administrators in the past year. At least half had recommended new curricula based on research, recommended curricula changes as a result of research or recommended other action affecting vocational education in a school in Arizona -- all as a direct result of research or research findings. There would appear to be a high degree of personal involvement in research activities by teacher educators in Arizona.

The exact meaning of ERIC was questioned and was defined as the Educational Research Information Center, an office set up by the USOE to compile and distribute research and instructional materials in each educational area. Each area is assigned to a specific ERIC center. The center for vocational education is the Ohio State Center. Abstracts of the material are published in two quarterly journals, AIM (Abstracts of Instructional Materials) and ARM (Abstracts of Research Materials). Backing up these abstracts are microfiche of the entire document. The microfiche are similar to microfilm except they are in card form. Each card holds up to fifty pages of documents. The microfiche are sold by National Cash Register for a nominal fee. However, the preparation of microfiche by NCR runs about one year behind the issuance of abstracts in AIM and ARM. The RCU has at present all the microfiche issued to date by NCR and will provide them free of charge to anyone doing research as long as the volume of requests does not exceed the RCU budget.

Research Review: Two research reports in the RCU library had been reviewed by Arizona vocational educators previous to the Conference, and copies of these reviews were distributed along with a questionnaire for participants review of the reviewer. There were two objectives to this part of the symposium: (1) to give the participants new information about the kinds of vocational research available, about specific research described in the reports, and the reviewer's opinions of the results of the research; and (2) to give the participants an opportunity to raise questions about the research and the reviewer's opinions. These questions would include significance of the results, implications, weaknesses and unsupported conclusions, and professional competence of the researcher and reviewer.

The selection of a report for review is based on a three part criteria: (1) reputation of the author, publisher, and funding source; (2) cost and size of the project; and (3) a preliminary examination of the report for apparent scholarly excellence and significance of results.

Conference Response to Reviews:

1. The Development and Evaluation of a Pilot Computer Assisted Occupational Guidance Program, Dr. Joseph T. Impellitteri, Pennsylvania Department of Public Instruction, 1968, reviewed by Delbert Jerome, State Department of Vocational Guidance.*

Seventy-eight percent felt there were remarkably new results in this research. Sixty-five percent felt the research agreed with what they already knew. But they were divided on the question of this research agreeing with other known research. Fifty-three percent thought it did, forty-three percent thought it did not, and three percent were undecided.

Only four percent of the group felt the reviewer was too critical. Twenty-six percent did not feel he was. Seventy percent could not decide. About half felt the reviewer might have been too easily influenced by the report; one-fourth felt he had not; and one-fourth weren't sure. Almost three quarters thought the personal convictions of the reviewer might have influenced his evaluation. An equal number agreed with the reviewer's recommendations of persons whose attention should be drawn to this report. Sixty percent felt they should personally read the report but only twenty-six percent thought they actually would read it. Over eighty-two percent knew how to obtain a copy if they decided to read it.

2. The Shortage of Skilled and Technical Workers, Walter Franke and Irvin Sobel, University of Illinois, 1968, reviewed by Benjamin J. Taylor, Associate Professor of Economics, Arizona State University.*

Sixty-nine percent of the participants felt there was nothing remarkably new in the results of this research. Over three-fourths thought it agreed with the information they already had. The same was true of other research they had read. Most of the group felt the reviewer was too critical but fourteen percent felt he was not. Less than one-fourth thought the reviewer was too easily influenced by the report. Over three-fourths of

*Copies of the reviews can be found in the appendix.

the group believed the convictions of the reviewer were not evident in the review.

Eighty-seven percent of the group felt the reviewer's recommendations of persons in Arizona who should have this report were correct. Only about half the group felt as a result of the review that they should read the report, and only one-fourth intended to do so. Three-quarters indicated they knew where to find it if they wanted it.

Research Utilization: One of the biggest problems in research today is the utilization of research available; how to best organize and distribute research materials to the people who need them, in the way they need them, when they need them. To facilitate this compiling, filing and dissemination of research the RCU has established a computorized library system.

Processing of Research Received:** When research reports are received by the RCU from ERIC, other RCU's, universities, State Departments, conferences or workshops they are immediately assigned a shelf number by the librarian and sent to a research assistant for coding.*** The coding includes the educational level, occupational area, type of classification (research, conference report, demonstration, commercial or non-commercial publication, etc.) and cross-indexing using the Wisconsin and ERIC key words.

This information plus title, author, publisher are all keypunched on tab cards. In the case of bibliographies and abstracts, the volume, page and reference number are included. The information is then permanently stored on a magnetic tape master file. The volumes are shelved and the tab cards kept in the RCU office for easy reference.

Processing of Requests Received:* When the RCU receives a request for research materials on a given subject a program is prepared for the computer matching the specific needs indicated in the request. The computer then prints out a bibliography of all materials contained in its master file which match the request. The RCU librarian pulls all material contained in this bibliography and each item is checked for usefulness of content, availability etc. and this information is noted on the bibliography. Any new items in the field requested that have not yet been entered into the computer are added to the bibliography and this fully annotated list is sent to the individual or agency making the request. From this annotated bibliography a definite order for materials desired may be placed with the RCU and the items will be supplied as quickly as possible.

While the use of the computer provides a rapid printout (about 15 minutes) of materials available, the RCU does not have full time use of the computer and allowance must be made for computer work loads.

** Copies of the flow charts of library processing can be found in the appendix.

*** A Copy of the Library Coding System can be found in the appendix.

* Copy of flow chart can be found in the appendix.

Improving the System: Faults and flaws within the system can only be detected and corrected through usage and to date very few requests for materials have been received by the RCU. It is hoped that everyone needing information for research, writing of proposals, designing of implementing pilot or demonstration projects, or simply wishing to expand their knowledge within their own field will take full advantage of the RCU library, and offer any suggestions or ideas which they feel will improve the system. It is also suggested that the coding system found in the appendix of this report be examined, and any suggestions or additions that make it more efficient, would be appreciated.

One excellent suggestion offered by the teacher educators was that the RCU prepare a simple, concise explanation of how the RCU might help a teacher or student solve a particular research problem. It was recommended that the RCU prepare a single sheet with a sample problem such as a teacher or student might encounter and illustrate how this problem should be submitted to the RCU; what the RCU would do on receipt of the problem; and, what information would be provided to the teacher or student. It was felt that a concrete example of this type would establish an intelligent concept of the RCU resources and encourage more use of the RCU facilities. The next RCU newsletter will incorporate this idea.

Certification of Vocational Educational Teachers

Copies of the proposed "Requirements for Teacher Certification in Vocational Education -- Special Needs" were distributed to the teacher educators for study. Discussion of these requirements will be contained in the Friday session. Mr. Gene Dorr stressed that while the final responsibility for determining Certification lies with the State Department, the help of the teacher educators is needed in planning and establishing these requirements. The most urgent need at the present time is for junior college oriented teachers.

DINNER SESSION

The Fourteen Vocational Education Amendments of 1968

Special Dinner Guest Speaker for the Conference was Dr. W. Patrick Loyd, Senior Project Officer for Vocational Education in the U.S. Office of Education, San Francisco Regional Office. Dr. Loyd presented a slide show giving a breakdown of the appropriation for vocational education under the new legislation.

In 1963, under the first vocational education legislation, there was a total enrollment of only 4,422,000. The projected 1968 enrollment is 8,150,000. Likewise the funding in 1963 was a mere $54,582.00; for 1968 it should run $265,000,000. The new admendments effective July 1969 will authorize $565,000,000 with $56,500,000, (10%), going to research and training. The balance of this new program will be used as follows:

$57.5	Million	Exemplary and Innovative Programs
45	Million	Residential and Demonstrative Schools
40	Million	Special Disadvantaged Programs
35	Million	Work Study
35	Million	Co-op Programs
35	Million	Teacher Training
25	Million	Home Economics and Consumer Home Economics
10	Million	Curriculum Development
150	Thousand	National Advisory Council
50	Thousand	State Advisory Council

The new legislation also requires that vocational education must be redirected to include the original seven areas plus disadvantaged (25%), handicapped (10%) and Post Secondary (25%).

THIRD SESSION

First speaker of the post dinner session was Dr. James Hamilton, University of Arizona Department of Agriculture, who spoke on Dr. Meyers trip to the University of Nebraska Workshop. The purpose of this workshop was to establish guidelines for teacher educator programs through study of changes in national patterns, emerging concepts of vocational education and the innovation of new programs for beginning teachers.

Attending the Workshop were thirty-two Deans of Schools of Education, twenty-six Deans of Schools of Agriculture, sixteen Deans of Schools of Vocational Technical Education, six members of State Departments, four representatives of the U.S. Office of Education and some RCU Directors. The Workshop unfortunately created the impression on those attending that the Deans of Education did not feel that Vocational Education had a place in universities and that the State Departments were too interested in Federal Funds at the expense of actual state needs. Recommendation of the Workshop was that radical surgery was needed in teacher education -- not the spasmodic bandaids it is now getting. Specifically identified as ways of improving teacher education were:

1. Objective study of institutions and the administrations that inhibit instruction.
2. Identify ideas and policies.
3. Evolve practitioners in research.
4. More use of modern mothods such as radio, TV, and computers.
5. Need for more information, evaluation and experimentation of audiences to be reached.
6. Need for more and better research into who to train, what jobs to train for, and how to train to prepare the best possible teachers.

The second post-dinner speaker was Mr. Kenneth Rowe who presented highlights of a recent Teacher Educator Conference in Chicago and a Research Conference at North Carolina.

Primary results of the Teacher Educator Conference was a recommendation of more Teacher Educator meetings and conferences where vocational education services could work together to eliminate duplication across the board. Some suggestions offered for consideration were:

1. Establish a pattern of across the board services without losing individual identification.
2. Establish common elements such as philosophy, psychology, methods, test and measurements, and audio-visual classes.
3. Establish a common language.
4. Study advantages of unifying such as cost, time and repetition.
5. Identify differences first -- then likenesses.
6. Cover each speciality throughly -- then broaden scope.
7. Don't sacrafice content.
8. Use research in other areas -- especially in disadvantaged and handicapped.
9. Above all don't lost sight of people.

The North Carolina Conference attended by Mr. Rowe was basically on research and evaluation in vocational education. It was felt that vocational education must look for a model for all services and that ideas should be borrowed from other fields. Copies of flow charts on "Systematic Program Planning" and "Evaluation -- A Decision Making Model" were distributed by Mr. Rowe.

FOURTH SESSION

Special Needs Certification

This session opened with a brief discussion of suggestions, ideas, and questions on the proposed Special Needs Teacher Certification. Copies of the proposed certification requirements had been distributed on Thursday for overnight study. The need for Special Needs teachers was stressed and the present acute shortage recognized. The chief concern appeared to be in the wording of academic requirements. It was feared that under the present wording a teacher might obtain certification without ever having had a single course in Special Needs Education. It was suggested the wording be changed to read, "Shall have successfully completed eighteen semester hours of professional teacher education within the following with a maximum of six semester hours in any one category. This would require a minimum of three semester hours of teacher education in Special Needs.

Enrollment Data Gathering and Application

The remainder of Friday morning session was devoted to an explanation of the enrollment data gathered by the State Department and analyzed by the RCU. Copies of the enrollment booklets were provided and follow-up procedures and the mechanics involved were covered by Gene Dorr and Paul Bennewitz of the State Department. Full and concise explanations of the enrollment card, enrollment printout, enrollment printout book by service for fiscal year 1968, and the RCU interpretations of the data book were given.

Status printout by service were also presented to the teacher educators. An explanation was given of the various sets of printouts: i.e. enrollment by course, school and instructor; status by service by course; high school student by status and service; miscellaneous O.E. codes by service; no status students by alphabetical listings; junior college students by status and service; 4048 breakout by O.E. code indicating COOP and Special Needs; and finally, the entire vocational education field in an unduplicated count by occupational classification.

Uses of the enrollment data and follow-up were discussed. For the first time the Division of Vocational Education is able to identify, by service and enrollment, all of the vocational education programs offered at each high school. Through this identification the supervisors are aware of the schools that need special help or attention. Trips can be planned more realistically and needs more accurately pinpointed for the teachers. It will also provide accurate and current data needed to meet the requirements of the new amendments.

Discussion and suggestions for improving the data gathering included the suggestion that follow-up cards be altered to provide the back of the card for obtaining information needed by teacher educators.

FIFTH SESSION

Vocational Teacher Education in Arizona

The fifth and final session of the conference was conducted by Dr. Robert Kerwood, Pima County Coordinator, who explained his evaluation of the teacher education program instrument. This instrument designed by Dr. Kerwood has been field tested in all fifty states. The instrument and results were the basis for his doctoral dissertation.

The teacher educators were broken up into groups of five to discuss his instrument rating of vocational education programs in Arizona. Following the individual group discussions, a general discussion presented the ideas that had been generated. Dr. Kerwood suggested that a master plan committee be established to identify objectives of vocational education and to assist teacher educators in formulating their own plans.

CONFERENCE EVALUATION

At the conclusion of the two day Conference, participants were given a Conference evaluation questionnaire. Severty-three percent felt the session on student data and follow-up may have benefited them in their work and over one-half considered this the most valuable session of the Conference. The uses of the enrollment data was considered by sixty-three percent to be the second most important session of the Conference. The research symposium was ranked as third in importance.

The most valuable experience of the Conference to most was the opportunity to exchange ideas and the setting up of a list of ideas for next year in teacher education. Also valued was the opportunity to get better acquainted with teacher educators from other universities and with the state supervisors. New ideas, inspiration in their work, and an opportunity to discuss their work with others in the same field were given in that order as additional gains of the Conference.

Ninety-three percent said their knowledge of research availability in Arizona had increased as a result of the Conference; eighty percent felt the utilization of research in schools would be increased; and sixty percent felt their knowledge of the kinds of research had increased in their specific field.

Beneficial results from the sessions on enrollment and follow-up data were reported by all of the participants. Ninety-three percent felt that the new system of data processing will bring about changes in vocational education in Arizona. The same number felt it may well have greater benefits than anticipated. Ninety-five percent felt that further improvements could be made in the enrollment procedures and sixty-three percent felt additional information should be gathered. Most of the participants felt that additional data should be gathered in the follow-up of former students.

Almost all of the Conference members said that they would be better able to identify enrollment problems and plan more effectively as a result of the information gathered. And almost 100% felt that as a result of the Conference more students may be given occupational skills for employment.

One-third of the group felt that identifying students with special needs had been made easier, and two-thirds disagreed. Only twenty percent did not believe vocational education for students with special needs was more imperative than for other students: thirty percent felt that it was. About one-third felt vocational education is making substantial progress in this area; two-thirds did not believe it is.

Seventy-three percent felt that teacher education in Arizona is increasing in effectiveness; twenty-five percent did not. More than half of the group said they felt that vocational teacher education generally is keeping up with the changing demands in vocational education. Over half thought that research may lead to major changes in methodology and requirements for certification.

Recommendations for improving future conferences included: (1) Shorter meetings that ended earlier in the day. (2) Concentrate more on individual services. (3) Invite senior and graduate students to attend.

Subjects recommended for inclusion in future Conferences were:

1. Cross-discipline planning of course offerings.
2. Coordination of curriculum between institutions.

3. Certification changes and reevaluation.
4. Special needs.
5. Uses of RCU for graduate students.
6. Programmed instruction.
7. Micro-teaching.
8. Serving manpower needs.

APPENDIX A

Research Review for Arizona RCU

By Delbert R. Jerome

Position State Supervisor of Vocational Guidance

Institution Department of Vocational Education

Date October 15, 1968

Title of Research Report:

The Development and Evaluation of a Pilot Computer Assisted Occupational Guidance Program

Author(s) Dr. Joseph T. Impellitteri, Principal Investigator.

Institution Pennsylania Department of Public Instruction

Publication Date July 31, 1968 **RCU Catalogue No.** 400177

1. After careful examination how do you evaluate the results of this research?

- **(a) Of major importance** ☐
- **(b) Important, ~~but not outstanding~~** ☒
- **(c) Of only average importance** ☐
- **(d) Of only minor importance** ☐
- **(e) Not worth further attention** ☐

2. Please give a brief description of the purpose, method, and results of the research. (Use additional paper if desired, but avoid unecessary length.)

Purpose:

The purpose of the series of three projects developed in the Computer Assisted Career Exploration System was:

1. "To provide an easily updated individualized occupational information retrieval system.

2. To develop through an essentially heuristic approach a process whereby youth could develop their own individualized framework of the occupational structure.

3. Provide an experience for youth to acquire, by simulated practice, operational strategies in relating their abilities and interests to occupational opportunities."

(continued on attached sheet)

2. (continued)

Method:

A student terminal provides the means by which a student interacts with the system. The terminal is tied to an IBM 1401 Computer by telephone lines, and is composed of a typewriter-like device, a tape recorder, and a slide projector--all under computer control.

The computer relates materials to the terminal by either typing out a message through the typewriter, displaying a particular image on the slide projector, or by playing a previously recorded message on the tape recorder.

Information concerning the abilities, preferences, and educational plans of a student are stored in the computer before that student begins the interactive phase. At this point he is given a list of 40 coded occupations which represent his entry into the system. The computer first requests the student to select one of the occupations about which he would like to learn more. The student responds by typing back a code number. The computer then types a very brief description of the occupation. The student is then asked if he wishes to know more about the occupation. If the response is positive, four operations are activated:

> Discrepencies which exist between the ability-preference profile of the student and the particular occupation are typed out.
>
> A two-minute taped interview with a worker in the occupation is played.
>
> A slide-projected image depicting the worker in four typical tasks in the occupation is shown.
>
> A 150-200 word description of the occupation is typed for the student to read and to keep for later use.

At any point in the process, the student may ask the computer to select for him those occupations which best fit his aptitude-preference profile.

Results:

The most recent trial of the project involved 140 vocationally-oriented ninth-grade boys, and was conducted between October, 1967, and

May, 1968 in a junior high school in Altoona, Pennsylvania. The most significant results:

> The boys scheduled an average of five 40 minute sessions with the computer.
>
> The average number of occupations studied was 16. Eleven complete and five partial descriptions.
>
> Sixty-five per cent of the boys requested the computer to select those occupations which best matched their aptitude-preference profile.
>
> The boys, generally, felt the terminal experience was valuable; forced them to seek out additional occupational information on their own; and the discrepancy statements forced a boy to further examine himself.
>
> The typeouts were considered the most interesting and helpful components of the process--the slides least interesting and helpful.
>
> The boys generally perceived the system as the best way to explore occupations, second only to on-the-job-experience.
>
> Specific items of occupational information can be taught by using this system, but
>
> As compared to a group of similar boys who were not scheduled on the system, the experimental groups stated occupational goals and choice of course of study did not seem to be affected by the experience.

3. Please give your frank opinions of this research report, with particular reference to the following:

A. In your opinion, has this research led to significant new knowledge or other educational benefits?

Yes X No______ Perhaps______

B. What do you feel may be the principal contributions at this time to vocational or technical education from this research?

(See attached sheet)

C. Who in Arizona could best use the results of this research?

State Department of Vocational Education
Arizona State Employment Services
Arizona Research Coordinating Unit

D. What -- if any -- errors, faults or shortcomings do you feel this research may have?

(See attached sheet)

E. In your opinion, does this research project as reported merit:

Further Research X Field Testing______

Implementation in a Pilot Project______

(Please use additional sheets if needed)

3. (continued)

B.

A completed demonstration that a configuration (taped, typed and visual materials) of occupational information can be computerized and rapidly retrieved for use at any number of terminals. Consider that a ninth-grade student can examine the possibilities of approximately 16 occupations in a matter of three hours and 20 minutes. Furthermore, the student can request either a partial or a complete description of every occupation banked that positively relates to his interests-aptitudes-abilities pattern.

D.

Detractors of the trait and factor procedure of vocational counseling will have a field day with these types of studies. In the first instance it will be pointed up that several respected longitudinal studies (Super, Teideman, O'Hara, etc.) have failed to establish any significant degree of stability of occupational choice among ninth-grade students. It will be suggested, also, that measuring instruments--even the GATB--are not yet accurate or valid enough for predictive purposes; that intangibles not subject to measurement, sometimes dictate the choice of career.

Despite all restraining arguments--the student who has access and has learned to use a computerized system of accurate occupational information, could only be more knowledgeable about the world of work and thus be placed in a much better position to make important decisions at the various points of vocational maturation.

APPENDIX B

Research Review for Arizona RCU

By Benjamin J. Taylor

Position Associate Professor of Economics

Institution Arizona State University

Date October 31, 1968

Title of Research Report: "The Shortage of Skilled and Technical Workers"

Author(s) Walter Franke and Irvin Sobel

Institution University of Illinois

Publication Date June, 1968 RCU Catalogue No. 400180

1. After careful examination how do you evaluate the results of this research?
   - (a) Of major importance ☐
   - (b) Important, but not outstanding ☐
   - (c) Of only average importance ☒
   - (d) Of only minor importance ☐
   - (e) Not worth further attention ☐

2. Please give a brief description of the purpose, method, and results of the research. (Use additional paper if desired, but avoid unecessary length.)

The basic purpose of the study was to establish the relationship between the labor market shortages of some occupations and the effectiveness of general labor market adjustment mechanisms including the impact of institutions on the adjustment process.

The method included efforts to establish which occupations should be considered for study. Chicago and St. Louis provided the area and occupations were selected on the basis of interviews with public and private employment service representatives, employer associations, training associations, training schools, and individual employers and union officials. Interviews were held to determine which occupations best met the criteria: (a) substantial and continuing demand by area employers; (b) evidence of serious shortages of workers in the occupations; (c) the requirements of training for occupations that extended beyond high school for at least 6 months; and (d) the bachelor's degree was not generally required for employment.

Once occupations were selected, employers utilizing the services of such workers were interviewed. The general sample structure included dividing firms according to the size of employment. The industries were broken into large, medium, and small categories.

2. Con't.

Workers in the six occupations were interviewed on the basis of subsamples. The number of workers interviewed in a particular firm depended upon the size of the firm. For example, if a firm accounted for five percent of total sample employment, then five percent of that firm's employees were selected for interviewing. Names were drawn from personnel files on a random basis. The panel of names was then used to break out subsamples which utilized one-half of the names on the list.

Lastly interviews were conducted with administrators of specialized training schools and high school counselors. Also mailed questionnaires were sent to training program drop-outs and completes as well.

Generally, the information gathered was not submitted to statistical analysis, but was generally presented descriptively as opposed to analytically.

The results indicate that the occupations studied are generally restricted to local competitive markets. The market itself tends to move toward a balance of supply and demand in each of the relationships. Changes in relative wages played only a minor role in bringing about adjustment to the shortage situations. Shortages in some occupations lead to changes in hiring practices on the part of affected institutions.

3. **Please give your frank opinions of this research report, with particular reference to the following:**

A. In your opinion, has this research led to significant new knowledge or other educational benefits?

Yes X **No**______ **Perhaps**______

B. What do you feel may be the principal contributions at this time to vocational or technical education from this research?

The study reveals the lack of responsiveness of institutions responsible for training technicians at below the baccalaureate level to shortages in the market place. It implies strongly that the major barrier to fulfilling jobs is the lack of knowledge regarding opportunities. Greater publicity of training programs and supply-demand forecasts are necessary.

C. Who in Arizona could best use the results of this research?

In order of importance:
(1) Vocational Education Division
(2) Arizona State Employment Service
(3) Universities and Junior Colleges.

D. What -- if any -- errors, faults or shortcomings do you feel this research may have?

The major shortcoming is that the methods of gathering data are not statistically verifiable. The information contained in the report is very interesting, but it may well be that a repeat of the study would lead to very different information even if the same circumstance surrounding as characterized the first study could be repeated.

E. In your opinion, does this research project as reported merit:

Further Research X **Field Testing**______

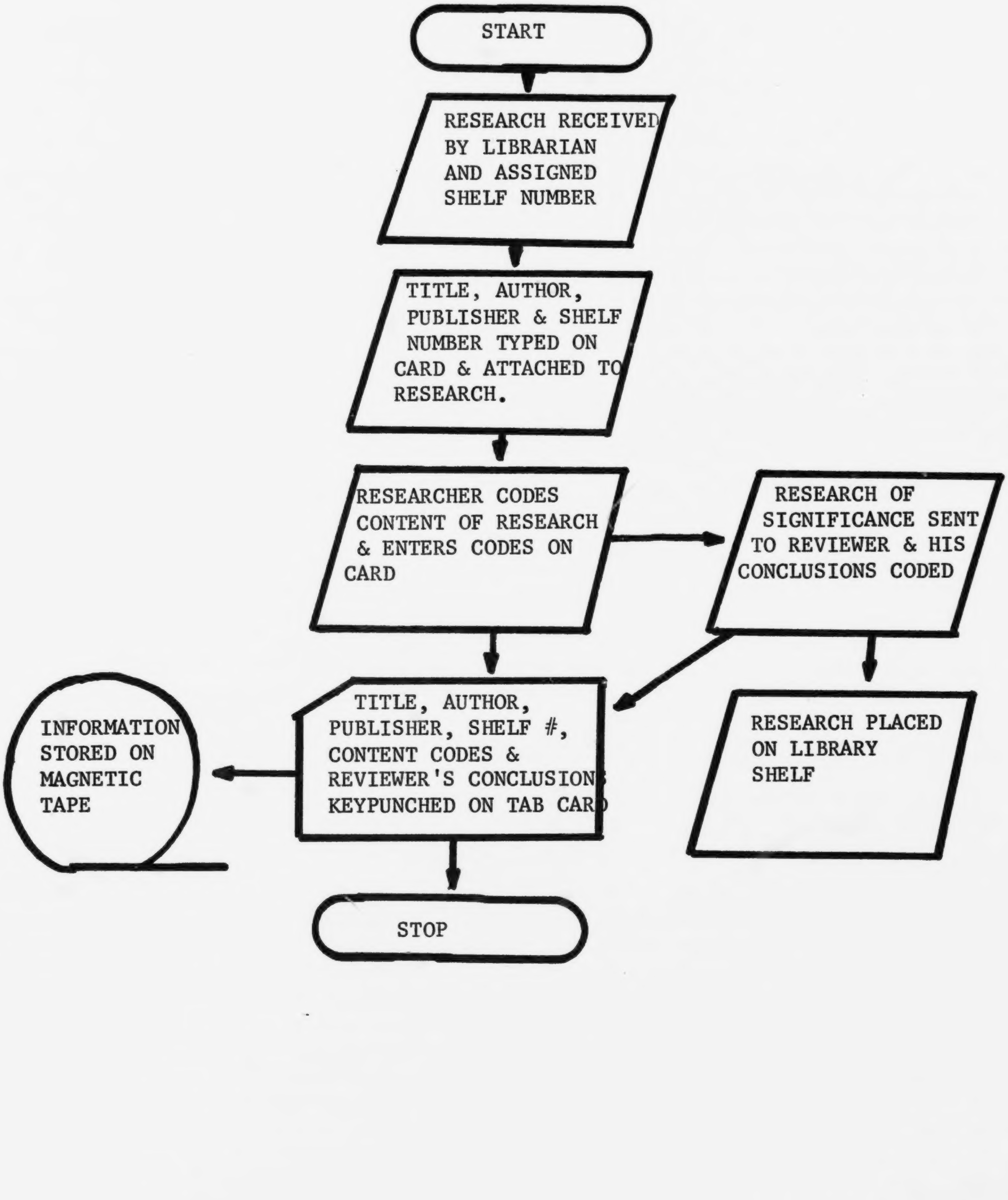
Implementation in a Pilot Project______

(Please use additional sheets if needed)

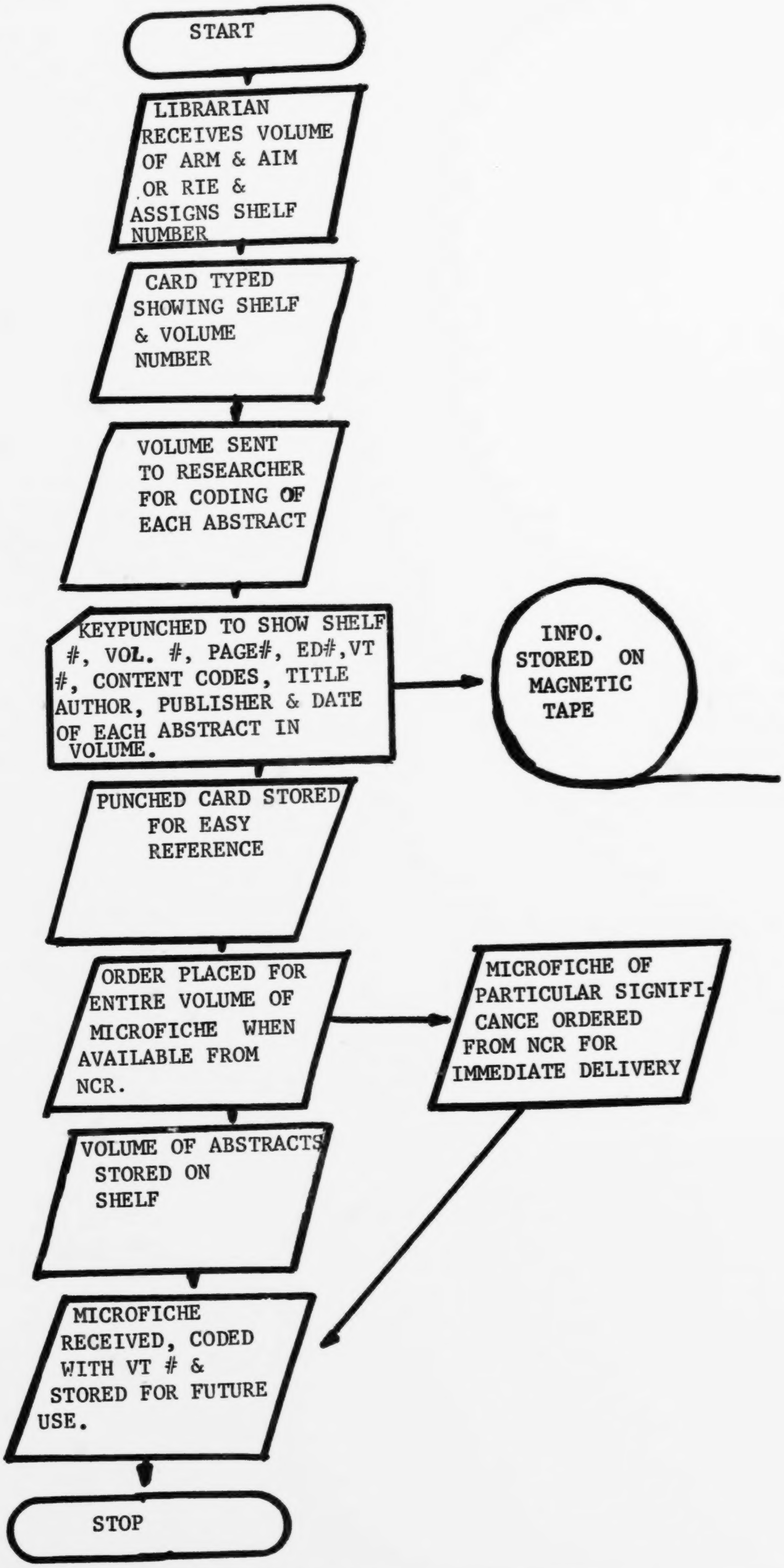
The major implication of the study is that either the U. S. Employment Service or the state employment services should devote staff and resources to determining how best to measure supply-demand situations in particular vocations. Once occupational information is generated, a system for providing such to the parties most concerned is necessary in order to alleviate labor bottlenecks in critical skills areas. A more coordinated market place can provide greater employment opportunities than currently exist since the particular skills required to perform work are not as great as is often required. Such false standards can be broken by implementation of a better informational system.

APPENDIX C

FLOWCHART OF RCU PROCESSING OF RESEARCH RECEIVED FROM OUT OF STATE UNIVERSITY


START
RESEARCH RECEIVED BY LIBRARIAN AND ASSIGNED SHELF NUMBER
TITLE, AUTHOR, PUBLISHER & SHELF NUMBER TYPED ON CARD & ATTACHED TO RESEARCH.
RESEARCHER CODES CONTENT OF RESEARCH & ENTERS CODES ON CARD
RESEARCH OF SIGNIFICANCE SENT TO REVIEWER & HIS CONCLUSIONS CODED
TITLE, AUTHOR, PUBLISHER, SHELF #, CONTENT CODES & REVIEWER'S CONCLUSION KEYPUNCHED ON TAB CAR
INFORMATION STORED ON MAGNETIC TAPE
RESEARCH PLACED ON LIBRARY SHELF
STOP

FLOWCHART OF RCU PROCESSING OF ARM AND AIM VOLUME RECEIVED FROM ERIC APPENDIX D


START
LIBRARIAN RECEIVES VOLUME OF ARM & AIM OR RIE & ASSIGNS SHELF NUMBER
CARD TYPED SHOWING SHELF & VOLUME NUMBER
VOLUME SENT TO RESEARCHER FOR CODING OF EACH ABSTRACT
KEYPUNCHED TO SHOW SHELF #, VOL. #, PAGE#, ED#,VT #, CONTENT CODES, TITLE AUTHOR, PUBLISHER & DATE OF EACH ABSTRACT IN VOLUME.
INFO. STORED ON MAGNETIC TAPE
PUNCHED CARD STORED FOR EASY REFERENCE
ORDER PLACED FOR ENTIRE VOLUME OF MICROFICHE WHEN AVAILABLE FROM NCR.
MICROFICHE OF PARTICULAR SIGNIFICANCE ORDERED FROM NCR FOR IMMEDIATE DELIVERY
VOLUME OF ABSTRACTS STORED ON SHELF
MICROFICHE RECEIVED, CODED WITH VT # & STORED FOR FUTURE USE.
STOP

RCU LIBRARY MATERIALS AND CODING SYSTEM APPENDIX E

SHELF NUMBER	SOURCE AND TYPE OF PUBLICATION
RC 100 000	BIBLIOGRAPHIES AND DIRECTORIES
100 000	Series for ERIC
100 100	Series for Ohio State
100 200	Series for Wisconsin Center
100 300	Series for other state RCU's
100 400	Series for Dissertations and Theses
100 500	Series for Miscellaneous
100 600	Abstracts &/or Projects at Regional Level
100 700	Abstracts &/or Projects at National Level
110 100	Directories
110 200	Research reference works
110 300	Occupational reference works
110 400	Economic Data
110 500	Miscellaneous data
RC 200 000	Arizona publications (except periodicals)
RC 300 000	U. S. Government publications (except periodicals)
RC 400 000	Out of state, university publications (except periodicals)
RC 500 000	Out of state, commercial & private publications (except periodicals)
RC 600 000	Periodicals, regular bulletins, newsletters
RC 700 000	Career information

CONTENT CODING

LEVEL OF EDUCATION: COLUMNS 70 - 73

0 - All
1 - Elementary
2 - Junior high
3 - High school
4 - Junior college
5 - College, university
6 - Graduate
7 - MDTA, retraining etc.
8 - Apprenticeship

OCCUPATIONAL AREA: COLUMNS 74-78

0 - All
1 - Agriculture
2 - Data processing
3 - Distributive Ed.
4 - Engineering tech.
5 - Health
6 - Home economics
7 - Industrial arts
8 - Office occupations
9 - Trade & industry

WISCONSIN & ERIC CODES

COLUMNS 79 - 81

0 - Administration
2 - Apprenticeship
3 - Cost Benefit Analysis
4 - Disadvantaged Group
5 - Educational Policy
6 - Finance
7 - Guidence
8 - Instructional Methods
9 - Job Analysis

COLUMNS 82 - 84

0 - Job Cluster Concept
1 - Special Needs
2 - Job Placement
3 - Manpower Needs
4 - Retraining
5 - Teaching Staff & Selec
6 - Technological Change
7 - Work Experience
8 - Labor Economics
9 - Occupational Psych.

RCU LIBRARY CODING (Continued)

SPECIFIC CATEGORIES: COLUMNS 85 - 88

0 - Curriculum
1 - Student Attitudes
2 - Instructional Equipment
3 - Facilities
4 - Image of Voc. Tech. Education
5 - Voc. Teacher Education
6 - Program Efficiency Analysis
7 - Occupational Information
8 - Research Coordination & Development
9 - Program Organization

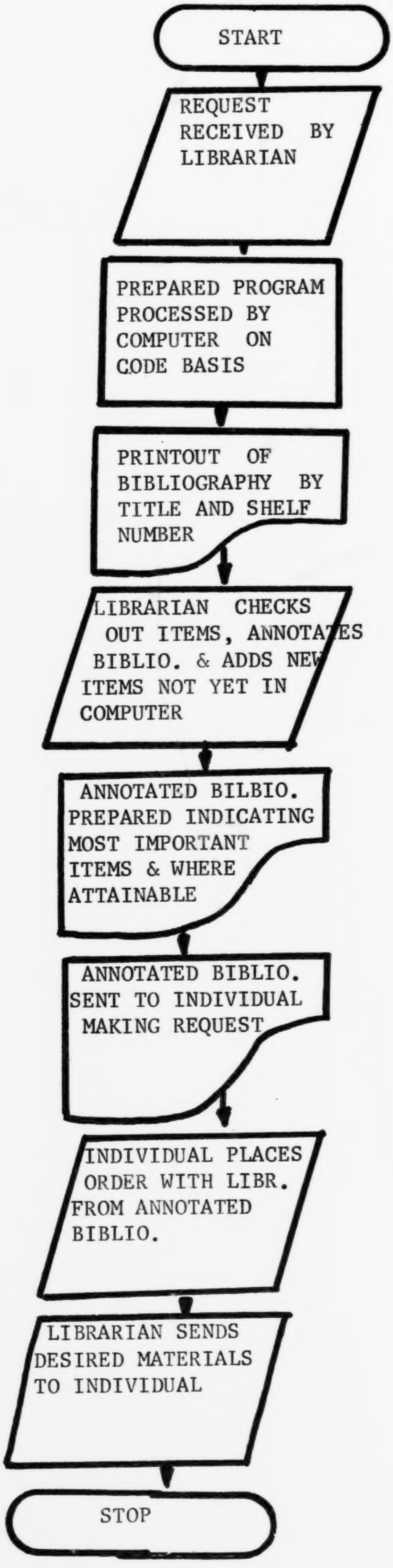
PUBLICATION CLASSIFICATION: COLUMN 89

0 - Research Reports
1 - Workshop or Conference Reports
2 - Demonstration or Pilot Reports
3 - Source Materials and Data
4 - Commercial Voc-Tech. Materials
5 - Experimental & Non-Commercial Voc-Tech. Materials
6 - Monograph
7 - Institutional Report

INDEPENDENT REVIEW REPORT COLUMN 90

8 - Reviewed as Satisfactory
9 - Reviewed as Unsatisfactory

APPENDIX F
FLOWCHART OF RCU PROCESSING OF RESEARCH REQUEST RECEIVED FROM EDUCATOR


START
REQUEST RECEIVED BY LIBRARIAN
PREPARED PROGRAM PROCESSED BY COMPUTER ON CODE BASIS
PRINTOUT OF BIBLIOGRAPHY BY TITLE AND SHELF NUMBER
LIBRARIAN CHECKS OUT ITEMS, ANNOTATES BIBLIO. & ADDS NEW ITEMS NOT YET IN COMPUTER
ANNOTATED BILBIO. PREPARED INDICATING MOST IMPORTANT ITEMS & WHERE ATTAINABLE
ANNOTATED BIBLIO. SENT TO INDIVIDUAL MAKING REQUEST
INDIVIDUAL PLACES ORDER WITH LIBR. FROM ANNOTATED BIBLIO.
LIBRARIAN SENDS DESIRED MATERIALS TO INDIVIDUAL
STOP

VT 007 919
Progress Report (Nov. 1, 1968 - Jan. 31, 1969).

New Hampshire Research Coordinating Unit for Vocational and Technical Education, Concord
Office of Education (DHEW), Washington, D.C.
MF AVAILABLE IN VT-ERIC SET. OEG-1-6-062739-2137(085) 08
BR-6-2739
Pub Date - 31Jan69 11p.

*VOCATIONAL EDUCATION; *TECHNICAL EDUCATION; *EDUCATIONAL RESEARCH; INFORMATION DISSEMINATION; PROGRAM EVALUATION; RESEARCH PROPOSALS; PUBLICATIONS; *PROGRAM DESCRIPTIONS; PROGRAM DEVELOPMENT; RESEARCH PROJECTS; STAFF UTILIZATION; *RESEARCH COORDINATING UNITS
NEW HAMPSHIRE; NEW HAMPSHIRE RESEARCH COORDINATING UNIT

Activities and accomplishments during the reporting period are detailed in this report and planned activities for the next reporting period are given. Studies completed are listed by title, investigator, fundings, and institution. Problems of personnel limitations in a small state as well as the dissemination of vocational-technical publications are described. Major activities listed include: (1) developing a Research Coordinating Unit brochure, (2) assisting in the development of a vocational education research agency in Maine, (3) publishing an instructor's guide for teaching nurses' aides and workshop guidelines for educators in health care, (4) abstracting research studies, (5) attending all state vocational education staff meetings, (6) assisting with activities of the New Hampshire Vocational Association, (7) contributing to a study of state-wide vocational education, and (8) developing charts and diagrams for New Hampshire vocational educators. Planned activities include: (1) continuing effort in the state's vocational education, (2) assistance in state-wide high school studies of students and graduates, and (3) stimulation of local research studies and initiation of pilot programs of farm business, planning, and analysis. (MU)

VT007919

ED033237

PROGRESS REPORT

Project No. 6-2739
Grant No. OEG 1-6-062739-2137(085)

THE NEW HAMPSHIRE RESEARCH COORDINATING UNIT

for

VOCATIONAL AND TECHNICAL EDUCATION

Dr. Richard L. Barker, RCU Director

Division of Vocational-Technical Education
State Department of Education
Concord, New Hampshire 03301

January 31, 1969

The research reported herein was performed pursuant to a grant with the Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

VT007919

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

PROGRESS REPORT

Project No. 6-2739

Grant No. OEG 1-6-062739-2137(085)

# THE NEW HAMPSHIRE RESEARCH COORDINATING UNIT
for
VOCATIONAL AND TECHNICAL EDUCATION

Reporting period of November 1, 1968 to January 31, 1969

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

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INTRODUCTION

This is the first progress report of the second year of the New Hampshire Research Coordinating Unit for vocational and technical education. It covers the Unit's activities from November 1, 1968 to January 31, 1969.

The Unit is funded under provisions of Section 4(c) of the Vocational Education Act of 1963 under Grant Number OEG-16-062739-2137(085).

The primary purpose of this report is to indicate the major activities and accomplishments of the New Hampshire Research Coordinating Unit during the reporting period and to denote future activities planned.

I. MAJOR ACTIVITIES AND ACCOMPLISHMENTS DURING FIRST YEAR OF OPERATION

The New Hampshire RCU has been actively involved in promoting the philosophy and objectives of the Unit to state and local leaders in vocational and technical education. These efforts are being guided by the objectives as stated within the original proposal. The Unit's objectives are:

1. To provide leadership in the systematic investigation of problems relating to vocational-technical education as it falls within the total framework of education.
2. To encourage the creation of a positive attitude toward educational research by those persons involved in vocational-technical education.
3. To stimulate research in the broad spectrum of vocational-technical education.
4. To provide a core of professional researchers and vocational educators to assist and guide individuals and groups in the initiation and implementation of studies and projects pertinent to occupational education.
5. To assemble, survey, and disseminate data for use in program evaluations and decision making.
6. To cooperate with local, state, regional, and federal groups for the purpose of coordinating research efforts and activities.
7. To ripen research competencies and to vitalize human resources.

The Unit has become an active contributor in maintaining, extending, and improving occupational education in New Hampshire. The RCU director has assisted in establishing two-way communications with State Department of Education personnel, teacher trainers, Employment Security personnel, local school teachers and administrators, various state agencies, and many others interested in advancing vocational and technical education. He has often conferred with these persons, both individually and in groups. From these discussions have arisen several projects and RCU emphases. Only the major activities of the Unit are reported herein.

STUDIES COMPLETED DURING REPORTING PERIOD

	Title	Principal Investigator/Director Project Personnel	Support		Institution or Agency
			RCU	Local	
1.	"Pilot Study to Determine the Need for Curricula Modification in Vocational-Technical Education in New Hampshire"	Dr. William H. Annis Joseph Perrigo	$6,254	$4,808	University of New Hampshire
2.	"Identification of Attitudes of New Hampshire School Board Members Toward Vocational Education in the State"	Jack D. Lynch	$3,645	$1,120	Merrimack Regional High School
3.	"A Study of the Educational Values in, and Community Resources for a Cooperative Vocational Program in the City of Rochester, New Hampshire"	Ralph K. Lieb	$2,453	$ 950	Spaulding High School
4.	"Study to Determine the Status of the Vocational Curriculum Presently Offered at Milford Area School:	Robert E. Morrill	$3,650	$1,100	Milford Area School
5.	"Follow-up of Selected High School Graduates"	RCU Staff			Research Coordinating Unit of New Hampshire
		COOPERATIVE STUDIES			
1.	"An Interstate Investigation of Employment Opportunities and Educational Requirements for Jobs in Outdoor Recreation and Conservation Enterprises"	Dr. William H. Annis	USOE-Voc. Ed. (4c)		University of New Hampshire
2.	"New England Educational Assessment Project of Vocational Education Study" (Manpower Needs Projecting)	Dr. Donald R. Randall	USOE-ESEA (Title V)		New Hampshire State Department of Education

STUDIES IN PROGRESS

	Title	Principal Investigator/Director Project Personnel	Support		Institution or Agency
			RCU	Local	
1.	"Comprehensive Study of Occupational Opportunities in and Surrounding Supervisory Unions 29 and 38"	Supt. Austin E. Frain	$8,556	$1,125	School Union #38
2.	"A Study to Determine the Adequacy of the Vocational Education Programs at the White Mountains Regional High School"	Robert L. Day	$6,172	$ 764	White Mountains Regional High School
3.	"A Study to Determine the Need for Offering a Vocational Program in Cosmetology at Berlin High School"	Richard E. Pinette	$1,419	$ 932	Berlin High School
4.	"A Study of the Skills Necessary for Beginning Office Workers for Employment in Business and Industry in New Hampshire	Miss Regis A. Horace	$1,580	$1,358	Plymouth State College
5.	"Curriculum Development and Teacher Education" - Project in "Affective" Family Relations Education	Dr. Earl Goodman	$2,000	$3,700	University of New Hampshire
6.	"Manpower Trainee Follow-up Study	RCU Staff			Research Coordinating Unit
7.	"Exploration of Child Day Care Centers"	Jacqueline Straus	$1,000		University of New Hampshire

II. PROBLEMS

No major problems have been experienced by the New Hampshire Research Coordinating Unit during the reporting period. Progress continues to be slow due to a one man operation. Some of our subcontracted projects have been successfully completed since the last report. Two subcontracted studies have been granted time extensions for full development of the completed report within the next month.

Being a small state, New Hampshire does not lend itself to large numbers of occupational education personnel. Because of this, state consultants and teacher trainers find themselves continually involved in routine matters, unable to set aside time for new and innovative projects. The state institutions of higher education are also small, with few graduate students. Teacher education for the vocational subject matter areas is also hampered by the lack of a complete department within one institution for all vocational areas. Presently they are scattered about the state.

III. SIGNIFICANT FINDINGS AND EVENTS

The New Hampshire RCU has completed several research and development projects during this reporting period. Significant findings and events are reported therein. A list of the major studies may be found under Section I of this report.

IV. DISSEMINATION ACTIVITIES

Dissemination of occupational education information is becoming a major function of the New Hampshire RCU. A great deal of effort is being expended in acquiring and disseminating documents. The RCU director has offered his services to all interested persons by becoming the VT ERIC representative in the state.

Considerable time and funds have been spent by the RCU director in assisting in the development of vocational and technical education publications in New Hampshire. He has acted as writer, editor, and/or publisher for several documents. Most of these and other vocational-technical publications produced in New Hampshire have been placed into the ERIC system.

The Unit continued throughout the reporting period to be an active contributor to maintain, extend, and improve occupational education in New Hampshire. Dissemination activities have become a part of this effort. Communications are continually being reinforced with educators, governmental agencies, employers and other interested persons. Considerable correspondence takes place in response to requests for occupational education information.

Copies of this report are being sent to:

1. Project Officer, Organization and Administration Studies Branch, Division of Comprehensive and Vocational Education Research, U.S.O.E.
2. Directors of all Research Coordinating Units
3. Administrative Staff of State Department of Education
4. State Board of Education
5. Members of the N. H. RCU Advisory Committee
6. Acquisition Specialist, ERIC Clearing House, The Center for Vocational and Technical Education, The Ohio State University
7. American Vocational Association
8. Center for Studies in Vocational and Technical Education, The University of Wisconsin
9. Other interested individuals and/or institutions upon request.

V. CAPITAL EQUIPMENT ACQUISITION

None.

VI. DATA COLLECTION

Several data collection forms have been used during this reporting period. Most of these were simple and designed to secure data of a general nature. No forms to obtain specific personal data requiring clearance by the Bureau of Research were used.

VII. OTHER ACTIVITIES

The New Hampshire RCU director is continually involved in counseling with persons, reviewing occupational education information, acquiring materials, in an attempt to carry out the objectives of the Unit. He is in constant communication with leaders of vocational-technical education within the state as well as other individuals and groups which have information and/or influence upon occupational education. The director has served on many educational committees and has attended a great number of meetings relating to his job.

Among the major activities are:

1. Development of an RCU brochure.
2. Assisting in the development of a vocational education research agency in Maine.
3. Publication of:
    - (a) "Instructor's Guide for Teaching Nurses' Aides".
    - (b) "Workshop Guidelines to Prepare Inservice Educators for Health-Care Agencies".
4. Abstracting research studies.
5. Attending all state vocational education staff meetings.
6. Assisting with committee and organizational activities of the N. H. Vocational Association.
7. Contributing to a staff study of state-wide vocational education.
8. Development of several charts and diagrams useful to N. H. vocational educators

The only major conference attended by the RCU director during the reporting period was the North Atlantic Regional Seminar and Research Conference for Agricultural Education November 6 to 8 at the University of Maryland.

VIII. STAFF UTILIZATION

Name	Title or Function	Funds Federal	Funds Local	Period Employed	Percent of Time
Dr. Richard L. Barker	RCU Director	X		Entire Period	100%
Dorothy LaBonte	Secretary	X		Entire Period	100%

IX. FUTURE ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD

Of primary concern of the New Hampshire RCU staff is the completion of projects and activities now in progress. In conjunction with this thrust, the director will continue to firm up pending local research studies and proposals. Further specific activities planned include:

1. Continued development of a new approach to vocational education at the secondary school level. A plan is now being presented to the educational leadership within the state.
2. Formation of a complete and comprehensive training and educational program for the N. H. Fire Service. A research proposal requesting 4c funds now awaits action by the USOE Region I Office.
3. State-wide vocational teacher educator conference sponsored by the RCU for the purposes of stimulating, facilitating and coordinating research and development activities.
4. Assist with the implementation of a state-wide high school graduate five year follow-up study.
5. Assist with the implementation of a state-wide high school student interest inventory study.
6. Stimulation of well outlined research studies by local vocational teachers, organizations, and administrative personnel.
7. To initiate the beginning stages of pilot programs of Farm Business, Planning and Analysis.

X. CERTIFICATION

Newell J. Paire
Newell J. Paire
Contract Officer

January 31, 1969

Richard L. Barker
Richard L. Barker
Project Director

January 31, 1969

VT 007 965
Webb, Earl S.
Opportunities and Requirements for Entry into the Agricultural Machinery Mechanics Trade. Summary.

Texas A and M University, College Station. Dept. of Agricultural Education
Texas Occupational Research Coordinating Unit, Austin
Texas Education Agency, Austin
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jan69 22p.

*EDUCATIONAL NEEDS; *AGRICULTURAL MACHINERY OCCUPATIONS; *FARM MECHANICS (OCCUPATION); *VOCATIONAL AGRICULTURE; *OCCUPATIONAL INFORMATION; INTERPERSONAL RELATIONSHIP; JOB SKILLS; EMPLOYMENT OPPORTUNITIES
TEXAS

Data about the farm machinery mechanics trade were obtained from 51 managers of farm machinery dealerships to: (1) determine the content that should be included in courses of study designed to train persons to enter the occupation, and (2) obtain information about the occupation that would be useful to persons considering the trade as an occupational goal. All data were collected by teachers of vocational agriculture utilizing the personal interview technique. Some major conclusions were: (1) A critical shortage of farm machinery service and repair mechanics exists in Texas, and (2) Employers are more concerned about the personal attributes of a beginning mechanic than about the level of knowledge and skills development. It was recommended that: (1) concerted efforts be made to encourage young men to select a career in the mechanics trade, (2) persons selected to be trained as mechanics demonstrate the aptitude to become competent, (3) efforts be made jointly by educators, industry and other groups to expand mechanics training programs, (4) programs for training mechanics be staffed with persons who have trade competence, and (5) courses of study include experiences designed to develop the personal attributes needed by competent mechanics. The complete research report for this study is announced as VT 007 966 (ARM Fall 1969). (DM)

VT007965

OPPORTUNITIES AND REQUIREMENTS FOR ENTRY INTO THE AGRICULTURAL MACHINERY MECHANICS TRADE

by

Earl S. Webb, Professor
Department of Agricultural Education
Texas A&M University
College Station, Texas

Sponsored Cooperatively
by
Occupational Research Coordinating Unit
Texas Education Agency
and
Texas Agricultural Experiment Station

January, 1969

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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ACKNOWLEDGEMENTS

The investigator expresses special appreciation to all the following persons who made significant contributions to this research by furnishing data and by making the procedure possible.

Area Supervisors

Area I - Walter Labay
Area II - Hulan H. Harris
Area III - Billy G. Lyons
Area IV - Ralph S. Moser
Area V - James Roden
Area VI - Ira E. Black
Area VII - W. H. Pittard, Jr.
Area VIII - A. B. Childers
Area IX - Jeff Davis
Area X - Kirk Pettit

Teachers of Vocational Agriculture

Gene Barnett, Plainview
Bill Bickel, Muleshoe
Bill Hawkins, Tulia
Jess L. Robinson, Hereford
Eldon Lawrence, El Paso
Weldon Holbrooks, Stamford
Bailey Wheeless, Pecos
Robert Becker, Brownfield
J. C. Dooley, Bryan
Gayle Todd, Bryan
Nolan Blaschke, Columbus
James Moore, Conroe
Gabe Dooley, La Grange
H. O. Henderson, Navasota
Lewis J. Rosprim, Eagle Lake
James D. Sowell, Bay City
Herbert Schumann, Needville
Kermit Blesinger, Needville
Joe F. Walters, Sealy
Charles Barron, Seymour
Rex Stephens, Stephenville
Bill Scott, Abilene
A. E. Boyd, Jr., Comanche
Francis E. Todd, Vernon
E. A. Randles, McKinney
J. L. Rushing, Terrell
S. A. Beckham, Sulphur Springs
A. W. Williams, Longview
Kenneth A. Johnson, Longview
D. B. Shelton, Paris
Mark Lee, Paris
Charles J. Jones, Clarksville
Lawson Sowell, Tyler
A. D. Winston, Tyler
George W. Smith, Thrall
E. L. Ross, Brady
R. J. Powell, San Saba
John E. McAnelly, Hondo

Teachers of Vocational Agriculture (cont.)

D. D. Hill, El Campo
Travis B. Reese, Rosenberg
Merrell Barfield, Jr., Wharton
J. E. Seamans, Livingston
Edwin E. Smith, Cleveland
J. D. Nixon, Beaumont
A. A. Johnson, Beaumont
Larry Shupak, Crockett
Lester Smith, Meridian
Harold Gilbert, Palestine
A. D. Wheat, Cleburne
Cecil Williams, Huntsville
Shepherd D. Brazil, San Benito
Cecil Clendenin, Alice
Leon Tomlin, Taft
Alton Calvez, Victoria

Respondents

J. M. Ford - Texas Farm Machinery, Inc. - Plainview
Fred Howard - E. R. Hufstedler & Son - Plainview
John W. Speck - W. O. Speck Machinery Co. - Plainview
Ira A. Welch - Texas Farm Machinery, Inc. - Plainview
Jim Cox - Fry and Cox, Inc. - Muleshoe
James O. Elder - Whitt, Watts, and Rempe Imp. - Muleshoe
Lee Roy Hughes - Fry and Cox, Inc. - Muleshoe
H. E. Reeder, Jr. - Muleshoe
Glen Rowland - Muleshoe
Roy D. Whitt - Whitt, Watts, and Rempe Imp. - Muleshoe
Alton Anderson - Tulia Farm Equipment, Inc. - Tulia
R. C. Hill - Hill-Featherston Co. - Tulia
J. W. Kendrick - Ziegler Wimberly, Inc. - Tulia
Bill Workman - Workman Machinery Co. - Tulia
Ed Workman - Workman Machinery Co. - Tulia
John Fielder - Hays Implement Co. - Hereford
E. A. Guinn - H & W Implement, Inc. - Hereford
John Hall - Davis Implement Co. - Hereford
Ernest O. Neff - Case Power and Equipment - Hereford
Cecil Oglesby - Hays Implement Co. - Hereford
Jim Tucker - Case Power and Equipment - Hereford
Thomas Carlo - Mason Equipment Co. - El Paso
Cleo Davis - The Myers Company - Fabens
Troy McCombs - The Myers Company - El Paso
William Vincent - Romney Implement Co. - El Paso
Glenn Warwick - The Myers Company - El Paso
Herman Cox - Jones County Implement Co. - Stamford
Jessie Teichelman - Jones County Implement Co. - Stamford
Leland A. Thane - Doc Jones Implement - Stamford
G. W. Viers - Stamford

Respondents (cont.)

C. K. Dozier - Dozier Tractor Implement, Inc. - Pecos
B. W. Powell - Powell and Son, Inc. - Pecos
A. D. Woody - Pecos Tractor and Picker Service - Pecos
Jack D. Brooks - Brownfield Tractor Co. - Brownfield
Wayne Crittenden - Brownfield Tractor Co. - Brownfield
Jim Ervin - B. E. Implement Co. - Brownfield
Preton Hester - Hester Implement Co. - Brownfield
Frank Melcher - Terry County Tractor - Brownfield
Albert W. Boeker - T & T Company - Bryan
Melton R. Patterson - Cen-Tex Tractor Co. - Bryan
Jess J. Caldwell - International Harvester Co. - Bryan
Alvin Carl Fulton - International Harvester Co. - Bryan
Royce C. Johnson - Johnson Brothers, Inc. - Columbus
D. J. Potter - Potter Ford Tractor Co. - Columbus
Dick Nutter - Conroe
J. M. Stoggs - Conroe Truck & Auto - Conroe
Hubert Brandt - Brandt Brothers Equipment Co. - La Grange
Paul J. Kleiber - La Grange Tractor & Implement Co. - La Grange
J. E. Morgan - Morgan Implement Co. - Plum
R. F. Bailey - Hugh Robison Farm Machinery - Navasota
R. H. Mallard - Mallard Tractor Co. - Navasota
Frank Vacante - Smith Brothers Implement Co. - Navasota
William E. Walkoviak - Mallard Tractor Co. - Navasota
Gary Calvert - Schneider Ware Co. - Eagle Lake
Leeland Copeland - Schneider Ware Co. - Eagle Lake
Corvin Frenzel - W. A. Virnau & Sons - Eagle Lake
Draper Stephens - Eagle Lake Implement Co. - Eagle Lake
Riley A. Wiese - Eagle Tractor Co. - Eagle Lake
Jack J. Hansen - Bay Equipment Co. - Bay City
Claude Bunell, Jr. - Elco Implement Co. - El Campo
Eugene Bodugen - Gulf Coast Farm Equipment - El Campo
Emil Linanec - Shult Implement Co. - El Campo
Julius Jankowski - Sealy Tractor & Implement Co. - Sealy
Walter A. Virnau, Jr. - W. A. Virnau & Sons, Inc. - Sealy
D. G. Wendt - Browder Tractor & Implement Co. - East Bernard
E. H. Wozniak - Wharton Tractor Co. - Wharton
Wilton Bailey - Rosenberg
Adolph E. Sebesta - Lamar Tractor Co. - Rosenberg
Marvin E. Wilke - Shult Equipment Co. - Rosenberg
Lester Selig - Farm and Ranch Supply - Needville
Floyd Garner - Montgomery Tractor Co. - Seymour
Don J. McDermett - McDermett Equipment Co. - Seymour

Respondents (cont.)

Luke Morgan - McDermett Equipment Co. - Seymour
R. A. Warren - O & W Tractor Sales - Seymour
Donnie Bramlett - Bramlett Implement Co. - Stephenville
David C. Fulburg - W. B. Sartor and Son - Stephenville
Lynn Kinsey - Bramlett Implement Co. - Stephenville
Juacaine Lindsey - Stephenville
Bill Doty - Doty Bros. Farm Equipment Co. - Abilene
Darrell C. Knight - Doty Bros. Farm Equipment Co. - Abilene
Marvin Bowden - Sartor Bros. Ford Tractor - Comanche
Roy G. Mitchell - Mitchell County Implement - Comanche
E. A. Sartor - Sartor Bros. Ford Tractor - Comanche
Howard G. Baxter - Ken Nichols International - Vernon
Fred M. Byrd - Byrd Implement Co. - Vernon
Floyd Graf - Greenbelt Farm Machinery Co. - Vernon
Johnny Moore - Wilbarger Farm Machinery Co. - Vernon
J. D. Harper - Harper Implement Co. - Goldthwaite
Mrs. Allen Hill - Hill Implement Co. - San Saba
Clauge Guatier - Guatier Truck & Tractor Co. - Hamilton
Lawson Kemp - Brownwood International Harvester Co. - Brownwood
Max Mahan - Mahan Tractor Co. - San Saba
Leon Williams - John Deere Co. - Brownwood
Kenneth Branch - Mahanay International, Inc. - McKinney
Herman Farley - Herman Farley's Auto Repair - McKinney
Harold McMahanay - Mahanay International, Inc. - McKinney
Jim Morgan - McKinney Hardware and Implement Co. - McKinney
Al Rushing - Fry Tractor Co. - McKinney
Herman White - McKinney Hardware and Implement Co. - McKinney
Jim Akin - Terrell
Louis Flores - Terrell Farm Supply - Terrell
Bob Mitchell - Terrell
David Stallings - Stallings Implement Co. - Terrell
Jean Rawson - Rawson Oliver Co. - Sulphur Springs
J. D. Rorie - Rorie Tractor Co. - Sulphur Springs
Jerry Lucy - Taylor Equipment Co. - Longview
Paul Reynolds - Taylor Equipment Co. - Longview
Frank E. Godfrey, Jr. - Russ Davis International, Inc. - Longview
Joe Stephens - Stephens Implement Co. - Henderson
Alton P. Smith - Smith Implement Co. - Paris
R. C. Singer - Bob Singer, Inc. - Paris
William F. Davis - Larue Ford Tractor Co. - Paris
Charles Smith Allen - Allen Farm Store - Paris
Willis L. Compton - Harvey Brothers - Clarksville

Respondents (cont.)

J. W. Gill - Bogata Implement Co. - Bogata
Clyde Harvey - Harvey Brothers - Clarksville
J. P. Johnson - Clarksville
W. R. Hendrix - Hendrix Farm Supply - Tyler
E. G. Brown - E. G. Brown Tractor Co. - Tyler
Leon R. Dominy - George Kidd Tractor Co. - Tyler
George Kidd - George Kidd Tractor Co. - Tyler
Jack Cornish - Hallsville
Frank E. Godfrey - Russ Davis International, Inc. - Longview
B. A. Harrison - Marshall
Edward Bigon - Bigon Implement Co. - Taylor
John Bigon - Bigon Implement Co. - Taylor
James Dvorak - Krieg Bros. Chevrolet Co. - Thrall
Eugene Guinn - Williamson County Equipment Co. - Taylor
Walter Jezek - Taylor
Jerry Tallas - Williamson County Equipment Co. - Taylor
Edwin L. Brown - Brown & Williams Conservation Contractors - Brady
Roger George - George Tractor Co. - Brady
Conley A. Purcell - Vinson Tractor Co. - Brady
August Steelhammer - Farmers Supply - Brady
Trenton Hamrick - Hill Implement Co. - San Saba
Harvy L. Reeves - San Saba Tractor Co. - San Saba
James Gronewald - Hondo Implement Co. - Hondo
Charles L. Neuman - Mumme Truck Sales - Hondo
John H. Strait - Strait Equipment Co. - Hondo
Bruno M. Angermann - Evans Implement Co. - Clifton
Jim Jones - Evans Implement Co. - Clifton
E. V. Stevens - Stevens Motor and Implement Co. - Clifton
E. C. Hines - Hines Supply - Palestine
R. E. Rowland - Farmers Tractor Co. - Palestine
E. H. Shelton - Shelton Implement Co. - Palestine
T. W. Bailey, Jr. - Farmers Implement Co. - Cleburne
Ray Baker - Baker Implement Co. - Cleburne
Luther B. Moseley - Jack Moseley Motors, Inc. - Livingston
Carel Rasberry - Livingston
Bob Reed - Smith Tractor and Implement Co. - Cleveland
Alton Smith - Smith Tractor and Implement Co. - Cleveland
D. A. Bennett, Jr. - Beaumont Equipment Co. - Beaumont
W. D. Hall - International Harvester Co. - Beaumont
Lannie McDaniel - International Harvester Co. - Beaumont
A. A. Richard - Beaumont Equipment Co. - Beaumont
James W. Gober - Nome Supply Co. - Nome

Respondents (cont.)

Charlie Howard - Oil City Tractors, Inc. - Beaumont
John G. Mokry - Oil City Tractors, Inc. - Beaumont
L. C. Tucker - Nome Implement Supply Co. - Nome
Jack Beard - Beard Truck and Implement Co. - Beaumont
Bennett Equipment Co. - Crockett
Jasper Driskell - Driskell Farm Service - Crockett
Arlon Gunnels - Knox Motor and Implement Co. - Crockett
Jed Cryer - Walker County Truck and Tractor - Huntsville
Roy Jordon - Walker County Truck and Tractor - Huntsville
James Hardy Nevill - Madison County Tractor Co. - Madisonville
Leon Wakefield, Jr. - Buddy Wakefield and Sons - Madisonville
Erwin H. Batot - Harlingen
Eddie L. David - Valley Implement Company - Harlingen
M. O. Fle[illegible]ner - Delta Sales - San Benito
Duane A. Steiner - Aldridge Washmon Co. - San Benito
Richard Walters - Planters Equipment Co. - Harlingen
Gene Kulchak - Kulchak Tractor and Equipment - Alice
Quitman Lindley - Lindley International, Inc. - Alice
Henry F. Valenta - Henry's Equipment Co. - Alice
J. C. Zapalac - Lindley International, Inc. - Alice
Billy Autry - Cage Implement Co. - Taft
Walter W. Childers - Taft Implement Co. - Taft
Tom M. Reding - Taft Implement Co. - Taft
Preston D. McKinny - Taft Implement Co. - Victoria
Jock Ross - Farm-Industrial Co. - Victoria
Henry Sandhop - Victoria Oliver Co. - Victoria
John Stockbauer, Sr. - Victoria Farm Equipment Co., Inc. - Victoria
John Stockbauer, Jr. - Victoria Farm Equipment Co., Inc. - Victoria

OPPORTUNITIES AND REQUIREMENTS FOR ENTRY INTO THE AGRICULTURAL MACHINERY MECHANICS TRADE

(A Summary)

The purpose of this report is to present (a) a summary of the investigation, (b) the conclusions drawn, and (c) the recommendations made to implement the findings of the study.

Summary

The purposes of this investigation were (1) to determine the content that should be included in courses of study designed to train persons to enter the farm machinery mechanics trade and (2) to obtain information about the occupation that would be useful to persons considering the trade as an occupational goal.

Data about the occupation were obtained from managers of farm machinery dealerships; data for the "course of study" portion were obtained from service managers of farm machinery service and repair shops. All data were collected by teachers of vocational agriculture who utilized the personal interview technique after instructions were given by the investigator.

The following summary of the major findings in this study is divided into two major divisions. The first division summarizes what was found to be the nature of opportunities in the trade and includes certain personal attributes that are rather closely related to opportunities.

The second division summarizes what were found to be the most important things a beginning mechanic should know (knowledge) and what he should be able to do (skills) to make successful entry into the trade and to advance in it.

OPPORTUNITIES AND PERSONAL ATTRIBUTES

1. An extreme shortage of farm machinery mechanics exists. Eighty-eight percent of the businesses participating in this study reported mechanics to be their greatest labor need. The estimated number needed now and within the next five years exceeds 7,000.
2. Partsmen represented the second greatest need as reported by 58 percent of the farm machinery businesses participating. The estimated number needed now and within the next five years exceeds 3,600.
3. The average workweek for mechanics, as reported by participating businesses, was approximately 48 hours. The average wage reported for a top mechanic per week was $119.65 or approximately $2.50 per hour. The average wage for a beginning mechanic was slightly less than $75.00 or about $1.50 per hour.
4. Almost 90 percent of the mechanics who quit a job to accept another did so in order to earn better wages.
5. Improper attitude was reported as the major reason for "firing" mechanics.
6. The minimum age for hiring mechanics was 18 as reported by the businesses in this study.

7. Most managers preferred that mechanics be high school graduates.

8. No formal programs were sponsored within the farm machinery service and repair shops in this study for training unskilled persons to be mechanics; however, it was found that a person with basic knowledge and skills can advance through informal means provided by shop personnel.

9. It was estimated by responding managers that 2.5 years of on-the-job training would be required for a person to become a master mechanic.

10. About one week of vacation time with pay was provided mechanics each year. The amount of time varied among the responding businesses and with length of service with the business.

11. Most dealerships reported sick leave arrangements which provide benefits for employees.

12. Almost all dealerships reported some type of insurance program with joint participation between employee and employer.

13. A vast majority of managers preferred that employees have a farm or ranch background.

14. Almost 95 percent of the participating managers stated they would like to see local high schools develop programs for training mechanics. Of these, almost all stated they would assist schools with such programs.

15. Desire and aptitude were believed to be the most important factors needed for success in the mechanics trade as stated by those managers responding.

16. Personal attributes of concern to managers were: pride in workmanship, respect for tools, cleanliness of work areas, and cleanliness of person.

KNOWLEDGE AND SKILLS--BASIC REQUIREMENTS

1. Safety was found to be the most important general knowledge a mechanic should possess.
2. The ability to use tools is the second most important asset a mechanic should possess. Special emphasis was placed upon being able to read and interpret operator's manuals and technical bulletins.
3. Beginning mechanics should own a basic set of hand tools.
4. In general, a beginning mechanic should be able to assemble new farm equipment. This area of work is not considered difficult by mechanics.
5. Less than a majority of service managers were of the opinion that beginning tradesmen should be able to adjust new farm equipment. However, these adjustments are not considered complex by mechanics.
6. Beginners who have a balance between functional understanding of mechanical units and the ability to service and repair units were preferred by the service managers responding. However, if a choice has to be made in the teaching process, it should be made in favor of understanding.
7. Service managers recommended that programs for training mechanics should begin with the engine and ignition system; then, as time permits, programs should include, in the following order, lubrication and fuel

systems, electrical systems and instruments, power trains, and hydraulics.

8. As general knowledge beginning mechanics should understand the principles of power transmission and the function of clutches.
9. As general knowledge beginning mechanics should understand the function of bearings, the different types and uses of bearings, and the cause of bearing failure.
10. As general knowledge beginning tradesmen should understand the function of gears and the cause of wear on gears.
11. Beginning tradesmen should thoroughly understand the principles of internal combustion as it applies to all types of engines, know the basic parts of engines, and be able to assemble engines once they have been disassembled.
12. Beginning tradesmen should understand the theory of ignition and know the function of the parts of the system. They should be able to install parts in the system and be able to time the system.
13. A thorough knowledge of the purpose and types of batteries and the charging rates for batteries was recommended for beginning mechanics. It is of major importance that they know how to service, test, and charge batteries.
14. Beginning mechanics should understand the function of each part of engine cooling systems and be able to check antifreeze solution and to remove, replace, and adjust fan belts.

15. Beginning mechanics should understand the function of governors and be able to adjust governors.

16. Service managers recommended that beginning mechanics understand the function of lubricants, the lubrication requirements of all mechanical units, uses of the different types of greases, and the various systems employed in oiling. They should be able to lubricate all mechanical units.

17. Beginning mechanics should understand the causes of detonation and preignition.

18. Beginning mechanics should understand the principles of carburetion and the function of each part of a carburetor. They should be able to inspect and repair carburetors, and make carburetor adjustments.

19. Service managers recommended that beginning tradesmen understand the function, need for, and maintenance of fuel air cleaners.

20. Beginning mechanics should understand LP gas liquid and vapor systems, understand the nature of LP gas tanks, and the function of regulators and carburetors. They should be able to test LP gas systems for leaks.

21. In terms of a diesel system, beginning mechanics should understand the need for cleanliness, nature of fuel warning devices, function of injection pumps, types of air systems, and types of starting aids. They should be able to remove and replace diesel fuel filters, purge fuel lines, and time injection pumps.

22. Beginning mechanics should understand the function of voltage, amperes, amp meters, volt meters, solenoids, and relays in an electrical system. They should also understand various kinds of electrical circuits and the nature and function of circuit protection devices.

23. Beginning mechanics should understand the principles of generator operation and the parts of a generator. They should also know why generator controls are needed and how voltage regulators operate. They should be able to remove, install, and polarize a generator.

24. The most important things for beginning tradesmen to know about starting motors are how they work and the purposes of brushes.

25. Service managers recommended that beginning mechanics understand the nature of temperature gauges and ammeters. They should be able to replace temperature gauges.

26. Beginning mechanics should understand the function of clutches and the causes of clutch troubles. They should be able to adjust clutch linkage and to remove a clutch assembly.

27. At the primary level of importance a beginning mechanic should understand the need for keeping parts clean when repairing transmissions and understand the synchronizing units of selective transmissions. They should be able to drain and refill transmissions.

28. Beginning mechanics should understand the functions of differentials, final drives, axles, and differential locks. They should know how to drain, flush, and refill rear-axle housings.

29. Service managers recommended that beginning mechanics understand the different types of power take-offs and the different types of clutches that control them. They should be able to replace power take-off safety shields.

30. Beginning mechanics should understand brake action and the nature of both mechanical and hydraulic brake systems. They should be able to adjust pedal clearance and to remove a brake assembly.

31. As a matter of major importance, beginning tradesmen should understand the principles of hydraulics. They should understand the basic parts of the various types of hydraulic systems. Of equal importance is an understanding of the need for cleanliness in working with hydraulic systems. In terms of skills it was recommended that beginning mechanics be able to check pressure of hydraulic systems, read schematic of systems, remove and replace hydraulic pumps, service filters, disassemble cylinders, and perform service on hydraulic lines.

32. Beginning mechanics should understand the principles of integral lift systems, understand the functions of the different types of remote lift systems, and understand the use and nature of quick couplers and why cleanliness is important in making hook-ups.

33. Beginning tradesmen should understand the principles of power steering and the different types of power steering.

34. Beginning mechanics should understand the proper uses of cleaning materials and the various methods employed in cleaning body parts for reconditioning.

35. Beginning mechanics should understand the principles of steering gear operation.

Conclusions

The following conclusions seem to be justified in light of the sample taken and the treatment applied to the data:

1. A critical shortage of farm machinery service and repair mechanics exists in Texas.
2. Employers are more concerned about the personal attributes of a beginning mechanic than about the level of knowledge and skills development.

Recommendations

The following recommendations are made to implement the conclusions reached in analyzing the data in this investigation:

1. Concerted efforts should be made to encourage young men to select a career in the mechanics trade.
2. Persons selected to be trained as mechanics should demonstrate through appropriate tests and other measures the aptitude to become competent mechanics.

3. Efforts should be made jointly by educators, industry, and other groups to expand programs for training mechanics.
4. Programs for training mechanics should be staffed with persons who have trade competence and who understand the nature of the farm machinery industry.
5. Courses of study developed to train mechanics should include experiences designed to develop the personal attributes needed by competent mechanics.

The following general recommendations were made by service managers for the development of programs for training mechanics:

> My first suggestion would be to screen the young men thoroughly as to interest, ability, health, and character. Select the best and most modern tools and machines to work with. Select modern engines and machinery to work on for training. Try to have well-arranged shops with heat for winter and cooling and fresh air arrangement for summer. You should also have facilities for cleaning parts and machines and for students to clean hands and tools and to change clothes. Try to select the best instructor possible--one who has a genuine interest in young men. He should know his business. He should, above all, be of good moral character--no bad tempers or whiskey drinkers or woman-chasers--because he will surely be a model for all the young men in his classes--good or bad. Give the instructor a small expense account so he can buy necessities for the shop without going before school board.
>
> Try to create interest through the dealership for young men to want to be a mechanic as a livelihood or challenge. The benefits and pay will have to equal or exceed other lower education vocations. Just because you teach mechanics in high school, even on a voluntary basis, it will not be enough to make a young man really want to be a mechanic. Tractors and farm machinery, particularly hydraulics, are changing fast; and someone will have to service them. But there will have to be enough interest created--pay, benefits, challenge--for a young man to choose mechanics for a living.

I am under the impression that we could take a young man with a good technical background and teach him what he needs to know, while earning a salary, in a matter of months. If he spent all of his training in actual "nuts & bolts," it would take us a longer time to teach him what he should know--I would think it would take several years. We have two 14-year-olds working as apprentice mechanics now. We have one 14-year-old, one 15-year-old, and two 16-year-olds working as new equipment set-up men. We also use these youngsters as cotton picker mechanics, and they learn and develop skill quicker than the older men. After one season on these pickers, they are capable of making field service calls on their own. John Deere is in the process of writing "textbooks" for such a course as this form would cover. The one on hydraulics is printed, and the one on electrical systems is close to being printed. The book that is out would be an ideal theory text for hydraulics.

Pick boys who really want to be mechanics. Teach the basic things that a beginner should know. We need young men in the field of mechanics very, very badly. I tried to answer this as if I was starting from scratch with a beginner.

A young man who understands the basic physics of electricity, magnetism, flow of liquids, leverage, etc., is much easier to train and will be a more valuable man in this profession.

The curriculum for farm machinery mechanics should be broken down into two parts. About 1/3 of the time should be spent in the classroom in related lecture and 2/3 in the shop in related instruction such as welding, engines, hydraulics, etc. It is important that the students learn to use modern test equipment, such as engine analyzers, hydraulic flow raters, distributor testers, valve refacers, diesel testers, and dynamometers. The basic theory and application is most important in elementary mechanics.

Impress upon young students the great shortage of mechanics in automotive and machinery businesses today.

Experience is the best teacher. The school shop should have the equipment to work on. Maybe the students could work on farmers' tractors for price of parts to get experience. Book learning is good but most shops have technical manuals to refer to. Farm machinery should be available so that students can locate parts, etc., and be able to associate with books.

Shop safety and clean parts is the beginning of the best mechanics.

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Instill the desire in the student to produce more than he is getting paid to produce so that he can advance. He should be inquisitive enough to determine what is causing a part's failure instead of just replacing a part and having it fail again. He will have to study the technical books at night for the equipment he expects to work on.

A mechanic should have a number of basic skills; and with a skill, technical knowledge will come naturally. But with technical knowledge, you will not naturally attain the skills. Here are a few things that I think a man must have before he can be a successful mechanic:

(1) He must be interested in mechanic work. He must know the hardships involved and be able to cope with them.

(2) After interest comes capability. He must be able to comprehend and develop skill of mechanics.

(3) He must be of good nature to mix well with customers.

BIBLIOGRAPHY

1. Anderson, Ober J. and Clarence E. Bundy, "What Competencies Needed in Farm Credit," The Agricultural Education Magazine, Volume 39, Number 4, October, 1966.

2. Binkley, Harold, Developing Programs in Agricultural Occupations, College of Education, University of Kentucky, Lexington, 1966.

3. Dillon, Roy D. and Paul S. Cain, Employment Opportunities and Usable Agricultural Skills in Non-Farm Agricultural Occupations in Appalachia, School of Applied Sciences and Technology, Morehead State University, Morehead, Kentucky, 1966.

4. Drawbaugh, Charles C., "Base Occupational Courses on Job Analysis," The Agricultural Education Magazine, Volume 39, Number 1, July, 1966.

5. Engineering Extension Service, Suggested Basic Course Outline for Automobile Mechanics, Texas A&M University, College Station, 1964.

6. Ingram, J. Fred, What Makes Education Vocational, American Vocational Association, Washington, D.C., 1965.

7. Mabon, E. J. and Clar[illegible] E. Bundy, "Competencies Needed in County Elevator Grain Marke[illegible]," The Agricultural Education Magazine, Volume 37, Number 6, January, 1965.

8. Morphet, Edgar R., (ed.), Building A Better South Through Education, Southern States Work Conference on School Administrative Problems, Tallahassee, Florida, 1945.

9. Phipps, Lloyd J., Handbook on Agricultural Education in Public Schools, The Interstate Publishers and Printers, Inc., Danville, Illinois, 1965.

10. Roberts, Roy W., Vocational and Practical Arts Education (second edition), Harper and Row Publishers, New York, 1965.

11. Russell, John Dale and Associates, Vocational Education, Staff Study Number 8, United States Printing Office, Washington, D.C., 1938.

12. Seventy-ninth Congress, Vocational Education Act of 1963, Public Law No. 88-210, H.R. 4955.

13. Sixty-fourth Congress, *The National Vocational Education Act*, Public Law No. 347, S. 703, Sec. 10, 1917.

14. Texas Education Agency, *Guide for Public Schools in Planning Programs of Vocational Education*, Vocational Division, Austin, 1965.

15. Texas Education Agency, *Suggested Basic Course Outline for Agricultural Machinery Service and Repair*, Austin, 1965.

16. U. S. Office of Education, *Educational Objectives in Vocational Agriculture*, Vocational Division Monograph 21 (revised in 1955), Washington, D. C.

17. Van Loh, Frederick A. and Clarence E. Bundy, "Competencies Needed by Fertilizer Retailers," *The Agricultural Education Magazine*, Volume 37, Number 6, January, 1965.

VT 008 509
Davis, Harry F., And Others
Speeches Presented at the National Conference on Evaluating Vocational and Technical Education Programs (Atlantic City, October 6-9, 1968).

MF AVAILABLE IN VT-ERIC SET.
Pub Date - Oct68 63p.

*VOCATIONAL EDUCATION; *PROGRAM EVALUATION; *EVALUATION CRITERIA; *CERTIFICATION; STATE LICENSING BOARDS; *CONFERENCE REPORTS; STANDARDIZED TESTS; FOLLOWUP STUDIES; ACHIEVEMENT TESTS; SPEECHES; EVALUATION TECHNIQUES; EVALUATION METHODS; TESTING PROGRAMS
*NATIONAL CONFERENCE ON EVALUATING VOCATIONAL AND TECHNICAL EDUCATION PROGRAMS, ATLANTIC CITY, NEW JERSEY, OCTOBER 6-9, 1968

"Standardized Achievement Tests as a Technique for Evaluating Vocational and Technical Education Programs," by Harry F. Davis, discusses what evidence of amount or extent of change in the behavior of the individual can be determined through achievement testing. The process of evaluation, as discussed by Charles W. Edwards in "Use of the Evaluative Criteria of the American Council on Education as a Technique for Evaluating Vocational and Technical Education Programs," contains two distinct elements; (1) description, and (2) the judgment of quality. The evaluation materials and processes of the National Study of Secondary School Evaluation are explained. "Student Followup Study Procedures as a Technique for Evaluating Vocational and Technical Education Programs," by Laure M. Sharp discusses the types of student followup studies which appear to be the most appropriate evaluation tools at a time of rapid change in the field of vocational education. In "State and National Licensing Examinations as a Technique for Evaluating Vocational-Technical Education," Benjamin Shimberg uses a recent study of licensing in five states to provide some useful insights into the more commonly licensed occupations and provide information about the examinations used in licensing practitioners. (CH)

VT008 509

Speeches Presented At The National Conference on Evaluating Vocational and Technical Education Programs

Atlantic City, New Jersey

October 6-9, 1968

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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STANDARDIZED ACHIEVEMENT TESTS AS A TECHNIQUE FOR EVALUATING VOCATIONAL AND TECHNICAL EDUCATION PROGRAMS

by

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National Conference on Evaluating Vocational
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October 6-9, 1968

STANDARDIZED ACHIEVEMENT TESTS AS A TECHNIQUE FOR EVALUATING VOCATIONAL AND TECHNICAL EDUCATION PROGRAMS

The process of learning in vocational and technical education is no different from any other instructional area. The goals and objectives are essentially the same since learning is the process within an individual whereby he makes changes in his behaviour, thinking and attitudes. Therefore, it is believed that the teaching process has been ineffective if the desired patterns of behaviour have not been achieved.

Evidence as to the amount or extent of change in the behaviour of the individual can be determined through achievement testing. Since achievement testing performs this vital function, it must be considered as an important phase of the learning process or total instructional program. The rational for this approach can be best illustrated by analyzing the following eight goals of an achievement testing program for vocational and technical programs.

1. Achievement testing helps to determine if the objectives of instruction have been achieved.

   The primary objective of pre-employment vocational and technical instruction is to provide the student with sufficient skills and knowledges for entrance into employment. The course of instruction is established to meet this objective and must be based on a trade analysis of the occupation for which instruction is to be provided. An analysis of the occupation becomes the basis for a course outline which in turn serves as the criterion for the construction of the achievement test.

   To establish validity, it is necessary to obtain some degree of standardization of the course outline. The standardization of a course outline dictates some provisions which must be met in the instructional program. It will include manipulative skills, related technology, reference material, teaching aids, technical bibliography, an equipment and tool list, progress chart headings, a statement of course objectives and a course description. The standardized course outline will therefore dictate the following provisions: (a) The length of the instructional program, (b) The time devoted per day for instruction, (c) The quality of facilities and quantity of equipment, (d) The industrial experience qualifications of the instructor, and (e) The ability level of the students. The degree of deviation from these provisions will, of course, have effect on the validity for the group being evaluated and, therefore, affect the quality of the instructional program.

2. Achievement testing provides a basis for revising the curriculum and improving instruction.

Revision of curriculum usually becomes necessary as a result of several factors. Vocational and technical education curriculum is probably affected by our changing technology and therefore dictates necessary change. New production methods, industrial materials and sophisticated machines used by business and industry demand the constant evaluation of the vocational and technical instructional program.

By identifying the needed changes and incorporating them into a sound achievement test, achievement testing can be used to determine how well adjustments are made in the instructional program to meet these new demands. Another factor which may contribute to the necessity to revise the curriculum is the upgrading of the educational experiences of the student before he is enrolled in the vocational or technical program. Achievement testing may help to determine if these experiences are affecting the curriculum by a review of the norms established each year. Other factors which may need to be considered for curriculum revision are differences in the quality of the student entering the program, updated equipment, change of instructors, and adjusted time schedules. Any change in the norm over a period of time necessitates a complete review of these factors which may have influenced the measured outcomes.

It must be remembered however that a change in the curriculum will necessitate a change in the testing instrument which should reflect the latest technical knowledges and skills being practiced in industry.

3. Achievement testing provides motivation for students and teachers.

Results of achievement tests can be used effectively to motivate both students and teachers to study and apply themselves effectively, providing some safeguards are established. The results of the achievement test must never be used to compare schools or individuals against each other, but an individual's score or school median should be discussed in reference to the established norm for the total group being measured. Norms should be considered on state, regional, or national basis for proper perspective in interpretation.

The interested teacher usually is anxious to evaluate himself as to how well he is doing. He is, however, reluctant to compare himself with others or have other instructors compare themselves with him. It is, therefore, necessary for the administering agency to establish definite policy concerning this practice. Once this policy is firmly planted and understood, teachers become interested in their weaknesses and are receptive to reviewing test results and denoting areas that need attention through their efforts. This means of motivation may stimulate the teacher and his willingness to upgrade himself through advanced education or additional work experiences. Also, it is of vital importance to motivate the student. He will need to realize the full value of the testing as an aid to helping himself to better self-understanding and possible job placement. Test results can point out to the student his weaknesses and strengths. Suggestions for change in these weak areas will stimulate his desire to achieve higher levels. Students naturally will compare themselves with each other; however, the instructor must not use the results in this manner. It is suggested that norms established for the state, rather than the school, be used for this comparison.

4. Achievement tests identify facility and equipment deficiencies.

The design of facility and equipment used in the instructional program is directly related to the objectives as set forth in the course outline. How well these objectives will be met is, therefore, dependent on the facility and equipment provided.

Results of achievement testing will reflect weaknesses particularly in equipment deficiencies. The lack of equipment to provide the necessary experiences built into the course of instruction will be evident. For example, cylindrical grinding requires the use of a specific machine: if the shop is not equipped with a cylindrical grinder, no experiences can be given to the student. The lack of experiences will usually show in the results of the testing program.

5. Achievement Testing is a tool for supervision.

There are two responsibilities of the supervisor which achievement tests help facilitate. One responsibility is to provide a continuing in-service development program for the teacher. The second is to provide for the coordination of instructional efforts.

The supervisor is obligated to discuss in detail the value of a testing program with the instructional staff. This value must be placed in terms of meeting the objectives of the instructional program and the result of the behavioral change of the student. The orientation of the teacher must first be in terms of evaluating the instructional program and second the influence which the teacher has upon the alteration of the instructional program. The orientation should focus the attention of the teacher and the supervisor upon the students and their level of achievement.

The method of supervision depending upon observation of classroom performance has on occasion resulted in resentment by the teacher of his supervisor since the supervisor may not always understand the procedures of operation with sufficient knowledge to adequately judge and offer suggestion in areas foreign to his own background. However, by measurement and evaluation, judgement can be made to reflect weaknesses in the instructional process, and that part of personal resentment can be overcome with the supervisor and instructor working as a team for quality education.

6. Achievement testing helps identify weaknesses of the instructor.

Achievement tests can point out areas of concern about the need for an in-service program for the teacher. Test results can identify weaknesses of the teacher in terms of his knowledge and experiences in his area of instruction. Many times, teachers teach best that which they know, and teach less effectively that which they know least. The machinist with limited background in grinding could not be expected to effectively convey knowledge to students or develop skills of operation. Achievement tests can therefore help identify for the instructor his need for these experiences. Therefore, it is suggested that the course outline and the objectives of the program will have bearing on the background of the instructor in that program.

7. Achievement testing helps identify weaknesses of the student.

It is primarily assumed that a course of instruction in vocational and technical education demands certain traits of students; traits which may be measured in terms of aptitude, interest and abilities. For example, a student lacking some degree of mechanical aptitude could be expected to perform poorly as a mechanic. A student who lacks dexterity in movement can be expected to have difficulty operating a lathe. Likewise students with deficiencies in other desired traits or experiences will usually perform poorly in certain areas of the instructional program. The student who cannot read will have difficulty interpreting a service manual as well as even interpreting the test questions.

These deficiencies can often be identified through proper use of test results. One needs, however, to gather as much information about the student as possible. It is suggested that at least some measure of mental ability be included in the testing program. This will give the instructor a means of identifying and comparing achievement with ability.

8. Achievement testing can help to evaluate reference materials.

While it is important that facilities and equipment be of quantity and quality to carry out the instructional program, effective instruction is dependent upon quality of instructional materials to supplement skill instruction. Many of the occupational areas have a wealth of information which can be used effectively in the instructional program. Not all of this material, however, is organized in such a manner that it could be used in place of a comprehensive course outline. It then becomes necessary for materials to be selected that will offer not only the most up-to-date information, but also that which will provide a sequence of instruction. Achievement tests can be used as a basis for judging the kind of content of instructional materials and their effectiveness in the instructional program. It will, however, be difficult, without detailed analysis, to distinguish between the quality of reference materials and the quality of the instructional process.

Proper use of testing results and utilization of a comprehensive course outline can provide sound rationale for re-study, re-planning, and modification of materials, and appropriate content for instructional sequence and effective learning experiences. Therefore, it is through the utilization of standardized achievement tests that sound techniques of program evaluation for instructional improvements in vocational and technical education can be obtained and maintained.

While the results of a testing program presented in the previous discussion are by no means complete, some designation has been attempted to outline those which may be considered paramount. In the initiation of any testing program, it is important that those involved have a complete understanding of this outline.

Presented with this discussion is a brochure describing the Trade and Industrial Education Achievement Test Program offered by the Ohio Trade and Industrial Education Service.

A review of this publication will indicate the details relating to the administration of these Achievement Tests, and will enable the reviewer to evaluate how the test scores may be interpreted and applied.

USE OF THE *EVALUATIVE CRITERIA* OF THE AMERICAN COUNCIL ON EDUCATION AS A TECHNIQUE FOR EVALUATING VOCATIONAL AND TECHNICAL EDUCATION PROGRAMS

by

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October 6-9, 1968

Ralph Tyler lists three kinds of evaluation that may be used to judge schools:

1. Structure--the facilities of the school buildings, plant, equipment, library facilities, teachers.
2. Process--the way in which the school carries on.
3. Product--ultimate evaluation. How far does the school carry out what it tries to accomplish. This type of evaluation is most difficult to do.[1]

The measurement of the product directly is extremely difficult to do. The human mind is too complex to be easily evaluated. Therefore, any proposed evaluation instrument must depend heavily on measuring the structure and the processes of a given school.

The National Study of Secondary School Evaluation has developed a proven way of evaluating schools and areas--even those which may be quite different from each other. This involves the basic principle that a school or area should be evaluated in terms of its objectives and in terms of the extent to which it is meeting the needs of the students who are enrolled. It is unfair to a school or an area to say that it is of poor quality because it does not prepare students for further academic work when, in fact, it interprets its function as that of preparing youth to enter employment immediately upon graduation. The materials and processes recommended by the National Study of Secondary School Evaluation provide a procedure whereby the product and processes of the school or area are considered in relation to the objectives of the school

[1] Ralph W. Tyler, "Modern Aspects of Evaluation," California Journal of Secondary Education, XXIX (November, 1954), 410-412.

or area and the needs of the students.

The process of evaluation contains two distinct elements: the first element of evaluation is description; the second is a judgment of quality based upon the description. The materials of the National Study of Secondary School Evaluation assist the staff in giving an accurate description and do not force the school into a pattern. These materials are published by the American Council on Education under the title of Evaluative Criteria. The Evaluative Criteria is published in book form and in individual sections which may be purchased separately.

In the evaluation of a school, the staff first describes the community which is served by the school. "Community" is used to denote both the patrons and area served by the school. The school is next asked to state its governing philosophy and objectives. This is accomplished with the help of two sections entitled, "School and Community" and "Philosophy and Objectives." These two sections form the background against which the other sections are evaluated. These develop an understanding of the students and their needs while also stating the direction which the school desires to take in educating its students. The remainder of the Criteria includes checklist and evaluation items for the evaluators to consider and against which they can measure their school's programs and services. An evaluating team proceeds through the following sequence in examining each section of a subject area: CHECKLIST, SUPPLEMENTARY DATA, EVALUATIONS, AND COMMENTS.

Behind the Fourth Edition of the Evaluative Criteria stand more than 30 years of research, experimentation, and revision. Through each edition, the major purpose has been threefold: to try and discover the characteristics of effective secondary schools; to develop methods and tools which would accurately evaluate the quality of any given school's program; and to point the way for a school staff to organize the materials and procedures which would bring about improvements.

Throughout the process of each revision, efforts have been made to secure criticisms and suggestions from users of the Evaluative Criteria. In addition, the Director of Revision visited accrediting association general meetings, workshops, and individual schools in order to discuss sensitive areas, problems, and suggestions.

To ensure the most knowledgeable formation of each section, authorities in individual areas were recruited. These experts, nominated primarily by regional and national associations, have represented various educational philosophies and have come from all parts of the country. One hundred fifty authorities have contributed to the composition of the Fourth Edition.

The Mechanics of the Self-Evaluation

The Evaluative Criteria guides the complex process of evaluating schools and their components. It is suggested that a steering committee have the responsibility for planning and supervising the self-evaluation of the school. This group names the members of all subcommittees, sets up a time schedule for subcommittee reports, and dispenses the materials and supplies which the subcommittee will need.

Once the subcommittees have been appointed, the two foundation sections must be prepared: "School and Community" and "Philosophy and Objectives."

These sections provide the basis upon which all other sections will be built.

The subcommittees on all other sections complete their work and report to the faculty. While a subcommittee is made up primarily of those who are specialists in their area, it is suggested that others be included whose specialty is outside the area. Teachers of Trade, Technical, and Industrial Education should help with the evaluation of other subject areas, and should be helped by teachers of those subjects with the evaluation of Trade, Technical, and Industrial Education. In addition, the school may choose to have parent and student representation on some of the subcommittees.

The members of each subcommittee are responsible for examining the GUIDING PRINCIPLES critically and making any modifications which seem desirable; collecting all data, exhibits, and explanations required for the area; evaluating each CHECKLIST and EVALUATIONS item; and reporting the results to the entire faculty.

The Evaluation Scale

The scale which is used by the subcommittee members is a 5-point measure:

4	Excellent or outstanding
3	Very good or above average
2	Average
1	Fair or below average
0	Missing or poor
NA	Does not apply

There is no definitive set of guidelines to describe in detail what excellent or poor really means in any given evaluation; each evaluator must simply draw upon his total experience in schools and make the best judgment he can on the basis of that experience. The 5-point scale is a continuum, with "4" and "0" the top and bottom degress of measurement, and the intermediate numbers marking gradations between those two.

In each evaluation item, the "NA" gives the subcommittee members the option of saying that an item does not apply to their program. Furthermore, the subcommittees may change the wording of any item in order to make it more meaningful to their program.

The Visiting Committee

The National Study for Secondary School Evaluation recommends that a school invite a visiting committee to evaluate its program. The purpose of such a step is twofold: to provide an objective view of the school which will serve as a check on the self-evaluation carried out by the staff; and to provide interaction and dialogue with the staff on the school's program. The visit is also valuable when the evaluation is used to interpret the work of the school to the community.

The size of committees, length of visit, intensity of work, method of selecting committees, schedules of visit, and methods of financing work of committees will vary from one area to the next. Each agency, county, state, or regional association, or cooperating group of schools should study its own situation and make careful plans to fit the circumstances which exist. The agency sponsoring the evaluation should then select the visiting committee.

The visit itself can be organized in any number of ways. It is obvious that large committees visiting for long periods will have more opportunity to observe the work of the school but will cost more for maintenance expenses. The single following guideline should underlie all plans: the visit should be organized to permit committee members to get as comprehensive a view of the work of the school as is possible in the time available. Suggestions covering the selection, size, and work of the committee are offered in the Evaluative Criteria.

Suggested Activities Following the Evaluation

The staff's effort is not concluded when the final notation has been written on the page. The self-evaluation should be a stimulating force leading to definite improvements in the services offered by the school to its students and community. The entire process in a forward-looking school will include self-analysis of the school's program and services; careful consideration of the findings and recommendations of such self-evaluations; objective checking of the school's analysis by a visiting committee; oral and written reports to the school by members of the committee; and a subsequent program of constant improvement by the school itself.

Though specific recommendations for post-evaluation activities are not offered in the Evaluative Criteria, some suggested activities are offered which are based on the more than 30 years of evaluation experience of various secondary schools. When initiating a follow-up program, the school staff should realize that the worst thing that could happen would be for nothing to be done following the self-evaluation; but almost as bad would be to attempt an overnight transformation of the school and its services. An organized plan for improvement, in line with the findings of the evaluation, would be the most logical plan to follow.

The National Study for Secondary School Evaluation suggests that first the administrative staff should become familiar with the information contained in the written report. Then the principal, using his discretion, should pass on the essential information to the faculty concerning both the strong and weak areas of the school. There will probably be a combination of areas given a high rating, and areas which are rated low. The staff must realize that the extent to which improvement is noted (if improvement exists) is of more significance than the actual number rating of any given area.

After a suggested "rest period" for the staff, the committee structure may be reactivated. Any number of methods for inaugurating specific improvements might be feasible; for example, the staff may fill in a chart listing those elements and services which are adequate, and those which are inadequate. Through group discussions, the staff could then pursue workable means of progress. The *Evaluative Criteria* presents questions which staff members could use as guidelines for their post-evaluation analysis and planning.

Format of the *Evaluative Criteria* Subject Sections

The operation of working in each subject section is an attempt to describe that program and make a value judgment on it. Each subject section is prefaced with GUIDING PRINCIPLES, which may be accepted, modified, or completely rejected and re-written by a school. They give the foundation and boundaries of the specific subject area. Before the evaluating team begins work on the individual items, the members specify the major goals of their program which will aid in the achievement of the objectives of the school. These objectives have been formulated with the aid of the two general area sections, "School and Community" and "Philosophy and Objectives." Throughout the self-evaluation, the CHECKLIST items and EVALUATIONS are rated with the overall goals in mind.

The following outline is followed in the evaluation of each subject area:

I. Organization
II. Nature of Offerings
III. Physical Facilities
IV. Direction of Learning
    A. Instructional Staff
    B. Instructional Activities
    C. Instructional Materials
    D. Methods of Evaluation
V. Outcomes
VI. Special Characteristics
VIII. General Evaluation

Within each of these sections is the CHECKLIST which is used to describe the school and its work. It is followed by SUPPLEMENTARY DATA whenever there is a need for a school to explain some part of the outline in detail or to add those things which are not found in the CHECKLIST and to describe how they are unique.

The SUPPLEMENTARY DATA sub-section is utilized for those areas in which a school must be asked for specific information which cannot be covered in the CHECKLIST. For example, a school may be requested to describe briefly the important features of its work experience program.

The next sub-section is EVALUATIONS. Here the subcommittee members must make value judgments on the quality and quantity of components of the program which are described in the CHECKLIST. For example, the CHECKLIST in "Physical Facilities" in Trade, Technical, and Industrial Education includes a number of statements which describe the provisions for fire extinguishers, clearly marked electrical control switches, ventilation openings, and first aid supplies; the EVALUATIONS combines these specific items to ask, "How adequate is the protection of students from fire, toxic gases, dust, and personal injury?" The members of the subcommittee must refer back to the ratings which they assigned to the items in the CHECKLIST and then make a subjective evaluation.

Concluding each sub-section is space for COMMENTS. This area allows a school to elaborate on portions of its program which would further explain it. It may be utilized by the subcommittee members to explain the reason for the addition or absence of parts of the program in their school. This space can be used to clarify items in the CHECKLIST or EVALUATIONS as they apply to their particular situation. Subcommittees are encouraged to use this space every time that its use will aid in giving a complete report of the school.

Provision is made for the subcommittee to consolidate the individual components of the evaluation in the "Special Characteristics" and "General Evaluation" areas of each section. In "Special Characteristics," the major strengths and weaknesses of the program are indicated and the subcommittee members are requested to recommend steps for the improvement of existing deficiencies. In the "General Evaluation," the program is evaluated on the basis of its contribution to satisfying the needs of students given in "School and Community," and its relationship to the school's purposes given in "Philosophy and Objectives."

The Evaluative Criteria as an Evaluation Instrument

Explaining the background, purposes, and mechanics of the Evaluative Criteria does not fulfill the total intention of this paper. There remains an unspoken question which must be answered: Why is the Evaluative Criteria a good evaluation instrument for Trade, Technical, and Industrial Education? The answer is manifold.

The major strength of the Evaluative Criteria is its flexibility. The great variety of secondary schools in the United States makes it impossible to measure schools in relation to a fixed scale or pattern. Differences in size, school buildings, equipment, environment, financial support, abilities of students, needs of communities, goals of youth and their parents, selection and preparation of teachers, and many other factors make uniform standardization impossible.

For example, the section of Trade, Technical, and Industrial Education must be comprehensive enough to consider a school's full-time in-school program or a part-time school and part-time employment (cooperative) program or both. It must incorporate evaluation items which will touch on skills and related technical information taught the students for preparation in occupational areas in any given section of the United States. It must allow for the inclusion of any facet of a local program which is not contained in the Evaluative Criteria. And it must provide a framework which allows an accurate evaluation to be made of schools which have eliminated segments of the Trade, Technical, and Industrial Education program which are not appropriate for their particular needs.

The Evaluative Criteria provides for the accurate evaluation of any program, and does not imprison ratings within rigid boundaries. Any and all parts of the Evaluative Criteria are provided for the convenience of the school staff in making its evaluation. Areas required by the philosophy of the school or to meet the needs of the youth who are enrolled or for whom the school is responsible should be provided and evaluated. The philosophy and the needs, rather than the Evaluative Criteria, impose the requirements.

1. The possibility of using the "NA" in place of the 5-point scale allows a school to refrain from making a number evaluation for items which do not pertain to its program.
2. The SUPPLEMENTARY DATA sub-section gives a school an opportunity to discuss the uniqueness of certain elements of its program, and to provide requested information on particular portions of the CHECKLIST.
3. The COMMENTS is an unassigned space which encourages subcommittees to freely explain, question, or make suggestions on any part of the CHECKLIST or EVALUATIONS.
4. The CHECKLIST items are broad enough to incorporate various methods of implementing certain desired goals and processes which vary from school to school.
5. The EVALUATIONS portion of each section allows comprehensive judgments to be made.

The Evaluative Criteria is a combination of many distinct areas, and it can be broken down into these separate units. A school which undergoes a complete evaluation will make use of all or nearly all of the Criteria sections. But any department or teacher in a school may utilize a single section to evaluate one subject or one service area of a school. For example, the Trade, Technical, and Industrial Education section alone may be ordered for an evaluation, and it will contain a page of instructions for anyone using that section.

Because the Fourth Edition of the Evaluative Criteria is the product of over 30 years of testing and revision, it has constantly added items which reflected significant trends in individual areas, and has sifted out those items which were superfluous or obsolete. For Trade, Technical, and Industrial Education, which must be parallel to our continually changing industrial society, this aspect of the Evaluative Criteria is a valuable one. Today's users benefit from the experience of all those who have previously used the Criteria and have made criticisms and suggestions for its improvement.

In providing for a visiting committee evaluation, the Evaluative Criteria furnishes a check against a school's inflation or deflation of its accomplishments. The visiting committee supplies an objective view. The presence of an outside group of authorities is also an encouragement for interaction and dialogue which are conducive to improvement.

The structure of the entire *Evaluative Criteria* ensures an evaluation not only of *what* is being done in any given area; but also *why*, *how well*, and *through what methods* it is being done. This in-depth evaluation is invaluable when the time approaches for the consideration of needed improvements and how to effect them.

There is continual and emphatic stress placed on the relationship between the individual subject areas and the basic philosophy of the school and the needs of the community. The subject area is not evaluated in a vacuum or according to any arbitrary standard. Each school is evaluated according to the degree which it meets the unique needs of its students and attains its particular objectives. This attribute is particularly germane to Trade, Technical, and Industrial Education, which, to meet the occupational needs of any given community, will vary from one locale to the next.

Finally, the *Evaluative Criteria*'s contribution is of more protracted consequence than the immediate evaluation. The written evaluation should be the prologue for a careful examination and policy for improvement. To facilitate this, there is a summarizing part of each subject section entitled "Special Characteristics." This allows the evaluators to consolidate their impressions from various individual sub-sections into lists of strengths and weaknesses of the subject. From these lists, the subcommittee members are requested to make recommendations for improvements. At the end of the *Evaluative Criteria* is the "Summary." Here the evaluators are asked to indicate the overall strengths and weaknesses of the school.

They are also asked to make specific suggestions. Space is allocated for a delegated committee to fill in the date when the suggestions were implemented. Beyond this, the Evaluative Criteria offers a number of various arrangements for expediting the evaluation followup.

The entire complex of evaluation--preparation, execution, followup--is considered in the Evaluative Criteria. Provisions are made for an accurate evaluation of a school's program and services--whether it is a comprehensive project with the entire faculty and a visiting committee participating, or a single teacher measuring the Trade, Technical, and Industrial Education program and his own teaching during the past year.

Sample page from the 1960 Evaluative Criteria

II. NATURE OF OFFERINGS

CHECKLIST

Vocational trade and industrial education includes experiences:

( ) 1. Designed to develop such skills and technical knowledge for beginning workers as are justified by the opportunities for employment.

( ) 2. Based upon and organized around a careful analysis of the skills and knowledge required for successful employment in an occupation.

( ) 3. That acquaint those enrolled with opportunity for employment in a related group of occupations.

( ) 4. That emphasize desirable personal characteristics, good work habits, and satisfaction found in good workmanship.

( ) 5. That place emphasis on safety practices in industry.

( ) 6. That provide for the study of employer-employee relations.

( ) 7. That are modified in the light of studies of graduates.

( ) 8. That are designed to assist students to make satisfactory adjustment to economic, industrial, and social changes.

( ) 9. That provide a basis for continued training after graduation.

( ) 10. Related to locating, applying for, and being interviewed for a job.

EVALUATIONS

( ) a. How adequate is the variety of offerings in terms of community and student needs?

( ) b. To what extent are the offerings consistent with present industrial conditions and procedures?

( ) c. How adequate is related technical instruction?

COMMENTS

STUDENT FOLLOW-UP STUDY PROCEDURES AS A TECHNIQUE FOR EVALUATING VOCATIONAL AND TECHNICAL EDUCATION PROGRAMS

A Working Paper prepared for the National Conference
on Evaluating Vocational and Technical Education Programs,
Atlantic City, October 6-9, 1968

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I. Student Follow-up Studies: The Basic Approach

Judging from the topics of the papers which have been prepared for this conference, it is clear that follow-up studies of students or graduates are but one of many possible approaches in the arsenal of evaluation techniques for vocational education programs. Since it is my task to discuss here student follow-up procedures and offer some recommendations for carrying out such studies, I will leave to others the broader topic of whether different and more valid approaches, perhaps insufficiently stressed in the past, can be used as a substitute or supplement for student follow-up studies. My emphasis here will instead be on the types of student follow-up studies which would appear to be the most appropriate evaluation tools at a time of rapid change in the field of vocational education.

Basically, all follow-up studies call for one or more contacts with graduates (and/or dropouts) at some time after they have left school; most often, this contact is established by means of a mail questionnaire, although telephone surveys and personal interviews have also been used. Depending on the focus of the study, investigations have ranged from simple "employment status" surveys of high school graduates and dropouts to elaborate questionnaires addressed to graduates of special programs which covered a wide range of topics. The implied or avowed purpose of most studies is to utilize the information obtained from students to assess the effectiveness of specific vocational education programs.

In past efforts of this kind, immediate employment outcome has often been the most frequently used judgment criterion. Placement information is unquestionably one extremely valuable input for those responsible for planning and executing programs of vocational education. However, it would be well to guard at the outset against exclusive reliance on such information in judging program effectiveness. I feel the need to start out on this cautionary note because among those responsible for planning, financing, and administering such programs, student placement is often considered the most valuable or even the only valid criterion of program effectiveness. In effect, implicitly and explicitly, the success of a program tends to be measured exclusively by the rates of employment of graduates in the occupations for which they were trained. Since in the past this information was rarely collected with the degree of precision needed to make valid judgments, this has often been proclaimed to be the major impediment to evaluation efforts in the field of vocational education.

Particularly at the present time when new roles and approaches are explored by vocational educators, there is a need to question the notion that occupational outcome--as measured by job placement and earnings--is the only valid criterion by which to judge the value of vocational education. The more recent critics of this notion have pointed out that vocational education is singled out among educational programs by a performance test which is seldom applied to other programs, such as music or art appreciation, or even college-preparatory courses. Usually no one questions the usefulness or desirability of such offerings in the face of a total absence of data as to the actual extent of music or art enjoyment on the part of those who took the courses, or perhaps more important, about the retention and performance in college of those who had taken college preparatory work in high school. It is true however, that at the high school level vocational education has in the past been more costly than other programs of instruction; this could be used as an argument to justify closer scrutiny in terms of effectiveness. It is also true that training for specific jobs and job placement--thus serving both the community and the student--were claimed by many proponents of vocational education at all levels as the most meritorious features of such programs. This goes a long way toward explaining the emphasis on occupational outcome in the evaluation process. But if I read the trends correctly, we are moving in a new and somewhat different direction now. Increasingly, vocational education will see as its mission the equipping of young people with flexible, life-time skills, rather than a more narrow preparation for specific openings in a local labor market. This is not to deny that one very important program objective involves the successful transition from school to appropriate work roles; but this is merely one of the criteria which a comprehensive evaluation should take into account.

In brief, here are some of the points to consider in relation to student follow-up studies:

1. In the past, the employment of a graduate in a job for which he received training was the most commonly accepted ultimate indicator of successful vocational training, although experts in the field have recognized for some time that many indicators other than training-related employment--for example enrollment in posthigh school training, or simple

retention in high school through graduation--might be used to measure the "success" of vocational training.[1]

2. Even if broader "success" criteria are introduced, comparisons between the fate of vocational students and those enrolled in other curricula (academic, general) or between program outcomes (for example Trade & Industries versus office occupations) may not be valid because of initial student selection procedures. If vocational students in certain programs are disproportionately recruited from among disadvantaged or low-achieving groups, then it may not be appropriate to compare for example the dropout rate in vocational education with that in general education. The more relevant question--which the usual follow-up studies cannot answer--is the probable fate of these same students in a different program.[2]

3. Finally, as we are moving toward a new era in vocational education, additional effectiveness criteria will have to be introduced. The task of the vocational educator, as stressed time and again by the Advisory Council on Vocational Education in 1968, is to equip students with appropriate knowledge and skills to function in a world of changing occupations and skill mixes. "Programs for youth must prepare them for change; programs for adults must be universally available and must emphasize coping

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[1] Report of the Panel of Consultants on Vocational Education, Education for a Changing World of Work, U. S. Department of Health, Education, and Welfare, Office of Education, Washington, D. C.: 1964, p. 89.

[2] See the discussion in Vocational Education--Report of a Conference Sponsored by the Brookings Institution--Published as a supplement to the Journal of Human Resources, Vol. III, 1968, in particular pp. 12-21.

with change."[3] The usual student follow-up techniques are obviously not appropriate to measure the extent to which these important long-term goals have been met.

I feel it is important to introduce these caveats before proceeding with the discussion of follow-up studies to stake the boundaries within which the discussion actually operates. This paper deals with the full spectrum of follow-up studies conducted in the past and currently in progress. Relatively simple follow-up approaches, centered on placement, will be discussed together with the more comprehensive approaches which researchers increasingly favor. As will be shown, there is a place for all types of studies in the total evaluation process, although placement is best viewed in a broader context, as suggested in some of the study models discussed below. It is to be hoped that such studies will increase in years to come, since in the words of the Advisory Council, they provide "the best possible information to the school on its own strengths and weaknesses."[4] But while we continue to use this important evaluation tool, we must recognize that such studies alone are not appropriate to measure the accomplishment of long-term goals which are being increasingly stressed for the field of vocational education. These require new evaluation techniques, to which researchers must increasingly turn their attention in years to come.

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[3] Vocational Education--the Bridge between Man and His Work (Publication #1) Highlights and Recommendations from the General Report of the Advisory Council on Vocational Education 1968, U. S. Department of Health, Education, and Welfare--Office of Education. 1968, p. 70.

[4] "The Bridge Between Man and His Work," op. cit., p. 76.

II. Types of Follow-up Studies and Their Uses

Two years ago, the Bureau of Social Science Research conducted a study for the U. S. Office of Education in which it reviewed major existing follow-up studies and came up with some methodological and research recommendations.[5] In the course of this review, it was found that studies in this area usually fall into one of two classes: descriptive or explanatory (complex research) studies. These will be defined in greater detail below. In general, descriptive studies have less explanatory power than the more complex research studies. Thus, the difference between the two types is primarily a conceptual one, since the basic methodology involved in conducting both types of follow-up studies is fundamentally the same. Both require that either the subjects of the research--graduates or students who had participated in training programs--be located and questioned about posttraining employment, further education, and other topics relevant to the study, or that persons, such as teachers and employers, who have had contact with them, supply information about the actual subjects of the study. The extent to which the data collected through this follow-up method will yield meaningful findings depends on the quality of the data (appropriateness and randomness of samples, control for nonresponse bias, application of appropriate statistical and analytical techniques) as well as the quality of the design (for example, availability of control groups, provision for time series information, etc.). Thus descriptive and explanatory studies can be good or bad, valid or invalid, and yield new insights or document the obvious.

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[5] Laure M. Sharp and Rebecca Krasnegor, The Use of Follow-Up Studies in the Evaluation of Vocational Education, BSSR, Washington, D. C., May 1966.

Nevertheless a researcher will tend to exhibit a bias in favor of the explanatory studies. To a large extent, this bias fits in with some of the reservations expressed earlier: many descriptive studies are limited to data about the specific employment status of the training graduates at one point in time. This approach suggests, therefore, that the mere fact that the trainees are able to get jobs is of overriding importance in evaluating vocational training, often without regard to more specific information concerning the level of the jobs and other important outcome variables, for example participation in other educational programs. Descriptive studies need not be so narrow: colleges have often undertaken follow-up studies of their alumni which seek to measure the success of their programs by selecting a variety of criteria, including salary, job advancement, job responsibility, as well as community activities or other criteria not directly related to employment. The success of the alumni in all these spheres reflects successful education or training. In the field of vocational education, however, this broad perspective is seldom reflected in past descriptive studies.

The more complex research studies on the other hand offer hopeful signs that the narrow and self-conscious "placement" criteria are being replaced by more sophisticated evaluation devices, which take a wider view of employment outcomes, and attempt to relate specific training approaches to identifiable changes in the trainee's work life. Occupational results continue to be an important (or even the most important) indicator, but the explanatory study is usually more likely to provide knowledge about the processes and situations which determine the relationship between training and occupation. In its most ambitious form--the study of the system within which all facets of vocational education interact--the explanatory study holds great promise as an evaluative tool.

The choice between descriptive and explanatory studies is to some extent dependent on the resources of the institution conducting the study. Most likely, a small school system or an individual school does not have the financial and staff resources to engage in elaborate studies. Such institutions, if they attempt any follow-up studies at all, usually limit themselves to a fairly simple mail survey of graduates or dropouts using a short postcard form, with a teacher, principal or assistant to the superintendent assuming responsibility for the survey in addition to his regular tasks. On the other hand, the larger systems, or state or federal education agencies, are in a position to field the more complex, explanatory surveys which require specialized skills in questionnaire construction, data processing and analysis available either within the system or through contractual arrangement with universities or specialized research organizations.

In the following pages, we shall dwell at some length on the descriptive studies which, for many school systems, represent at present the only feasible approach. Some of the model studies done along these lines have been mentioned as possible reference sources, but we recognize that there may be many others, as good or better, which have not come to our attention. From the descriptive studies, we go on to the more complex research studies which seem to us to hold the most promise in the long run.

A. Descriptive Studies

Descriptive studies range from statistical placement reports to one-time descriptive studies, trend studies, and longitudinal studies.

The latter involve more taxing data collection and analysis efforts than placement reports and one-time descriptive studies, and are likely to yield better and more useful data for long-range evaluation efforts.

Placement reports.--Statistical placement reports, as commonly used in the evaluation of vocational education, rely on contacting of vocational course graduates and securing brief items of information about the graduates' placement status at the particular moment of contact. The findings are presented in the form of tabulations rather than detailed analysis of the data. A list of courses tabulated by number is the usual procedure. The North Atlantic Region placement reports demonstrate the relative ease with which data is obtained. Over the past ten years the proportion of course graduates for whom placement data was unobtainable averaged between five and ten per cent of all graduates. The reports show that the larger states in the region, particularly New York, have relatively the greatest difficulty in contacting graduates.[6]

Such follow-up studies have often been conducted under the direction of an individual state as part of a report to the Federal Government. The North Atlantic Region reports are actually composite state reports. Vocational educators, both teachers and administrators, who may be untrained in research procedures contact the former students and collect the data. Theoretically, placement data is collected at a point in time after graduation, but the procedures are not always clearly spelled out and there is reason to believe that lack of control of untrained personnel may result in the confusion of employment plans obtained from the trainees before graduation with actual employment status six months after graduation. Inadequate response rates and the biases usually associated with this are another frequent problem. Among users of these data, there is considerable doubt about the reliability of this procedure.

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[6] For a good example of this type of report, see State of Arizona, 1964-1965 Follow-up Summary, Phoenix 1966 (Mimeographed).

The format used to present placement information classifies the graduates according to the following statuses: In jobs related to training, in jobs not related to training, continued in full-time school, entered armed forces, unemployed, and unaccounted for. The decision to classify a job as related or unrelated to training may be made on the basis of the individual's self-report or through a comparison of job titles and the particular program in which the graduate was enrolled. Obviously, there is considerable opportunity here for arbitrary decision making. Graduates in military services and those continuing their education are considered unavailable for employment.

As with all follow-up studies, one major difficulty is the location of the intended respondents. However, this problem is minimized here because contact usually occurs shortly after graduation. If the respondent cannot be located, there are persons still available in the area who know where he might be--parents, teachers, friends, etc. With sufficient expenditures of effort and money, extended coverage is possible even many years after graduation. In a New Jersey study of graduates 91 per cent of the sample was reached ten years following high school graduation.[7] In addition, the use of standardized placement status forms makes it relatively easy to conduct this type of study.

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[7] Burr D. Coe and J. Henry Zanzalari. After Ten Years--A Ten Year Follow-up of Middlesex County Vocational and Technical High School Graduates. New Brunswick, New Jersey: 1964.

Aside from the aforementioned lack of reliability inherent in the data collection, the primary inadequacy found in this study design lies in the fact that it is a statistical report of placement at only one time in the life of the individual rather than a study of career patterns. The basic assumption operative here is the idea that initial placement is crucial in determining long-term occupational choice and career patterns. One major study of career patterns of one group of vocational students has in fact shown this to be the case. Eninger states that "if the graduate's first job is not in the trade studied or highly related, the chances are high that he will never enter the trade or a highly related trade. But, if his first job is in the trade of a highly related trade, the odds are great that he will stay in the trade."[8] This situation, of course, varies by occupation and may be less likely to persist in the future due to the more rapid rate of economic and technological change.

Perhaps the best that can be said for placement reports is that from the point of view of the school administrator, they offer speedy and inexpensive feedback highlighting the extremes: situations where related placements are very high, suggesting that programs could be expanded without creating absorption problems, and situations where related placements are very low, suggesting the need for a closer look. Little can be inferred for programs which fall between these extremes, and even less can be inferred about the true effectiveness of programs for the particular population served. For more depth in assessing effectiveness, other follow-up approaches are necessary. However, for the administrator who cannot afford a research program, this type of feedback may be better than nothing. His best approach is to use a very simple form, make sure that actual follow-up data (rather than pregraduation plans) are recorded and insist on an adequate response rate (better than 70% of the student must be reached).

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[8] Max U. Eninger (Project Director). The Process and Product of T & I High School Level Vocational Education in the United States. Pittsburgh, Pennsylvania: American Institutes for Research, 1965.

One-time descriptive studies.--The one-time descriptive study is more analytical in its focus. It illustrates a situation or describes individuals at one particular moment in time. In evaluating vocational education this method of study has involved an analysis of the graduate's employment and personal situation after he graduates (or drops out) in relation to his background, ability, and training received. The analysis, often extensive and detailed, is based on data gathered from the teacher, the employer, or the work supervisor in addition to or in place of information gathered from the graduate himself. An exceptionally thorough and rigorous evaluation of vocational education for practical nurses was undertaken in Michigan in 1957.[9] Records of students and dropouts were studied, agencies evaluated the practical nurses they employed and graduate nurses evaluated their own training. In another study, former merchandising students were described according to occupational status, age, training, place of residence, and job progress. These graduates also evaluated their own training and made recommendations for improvement in the teaching and content of the courses.[10] In a recent project by investigators at Western Michigan University, comparisons are made between the characteristics of persons of posthigh school age who are enrolled in vocational or technical school, are employed, or are looking for work, and the characteristics of their former classmates who have enrolled in higher education. All of these former students had been studied and tested while in school.[11]

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[9] Mary Schmitt and Ralph Tyler. Facts about Practical Nurse Education in Michigan. East Lansing: Department of Public Instruction, Michigan State University, 1957.

This type of descriptive study has often been limited in scope, concerned with a particular type of vocational education program of a particular school. However, there is no reason why such a study could not be accomplished on a wider scale with extended relevance for other vocational education systems. The most important weakness, as in the statistical placement report, is the reliance on information obtained at one particular moment in time from which to draw conclusions for the past and future. However, this limitation is lessened by conducting the follow-up at an extended time after training, such as 2, 5, or 10 years after graduation. A model study along these lines was done by Little on all Wisconsin high school graduates (including those of vocational schools) 8 years after graduation.[12] Descriptive studies of this type are very suitable for larger systems and programs which seek to make a thorough assessment of the comparative impact of various vocational programs, and attempt to answer the nagging question as to the relative impact of vocational education for specific subpopulations such as members of minority groups. A further elaboration on this design, which adds greatly to the value of this type of study, is the trend study, which adds a time dimension to the one-short descriptive study by considering at least two groups or cohorts who had completed vocational training at different times. This allows for a variety of comparisons and provides insights about ongoing processes and trends, with respect to the relation between training and employment. This design was used in a study of Trade and Industry graduates of three classes: 1953, 1958, and 1962, conducted by Eninger, which will be further discussed in the next section of this paper.

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[10] Marilene Van Wagenen. A Fifteen-Year Sampling Survey of Former Merchandising Students at Sacramento City College. Sacramento, California: 1964.

[11] George G. Mallinson. "Characteristics of Non-College Vocationally-Oriented School Leavers and Graduates." Kalamazoo: School of Graduate Studies, Western Michigan University, 1965.

[12] J. Kenneth Little. The Occupations of Non-College Going Youth. (Research Report No. 2). Madison: Center for Studies in Vocational and Technical Education, University of Wisconsin, 1965. (Mimeographed.)

Longitudinal studies.--Another variant of the descriptive study is the longitudinal study, based on data collected from the same sample of individuals at several different points in time, to obtain a picture of career development rather than placement alone. In studies of the effectiveness of vocational education this has taken the form of before and after studies in which comparisons are made, in terms of employment, of career aspirations before graduation and actual goals achieved after graduation. Furthermore, research has involved contacting individuals at specific time intervals such as while in high school, shortly after high school graduation, and two years after graduation. By far the most ambitious vocational education follow-up of this type involves six questionnaires administered over a twenty year period for the purpose of establishing a description of long-term career patterns of practical nurses.[13] Obvious difficulties are involved in following respondents over such a long period of time after the initial contact, and, given the rapid rate of change in the educational scene, practical value from an administrative viewpoint of conducting very long-term follow-ups appears uncertain at best. Occasionally an attempt is made to compare trend and longitudinal data, which at least in theory, would be the most productive device, since the interaction of "career effects" and "trend effects" could by analyzed. This method has the further advantage of providing faster and more sophisticated feedback than most other designs. An attempt in this direction can be found in the study by Haines and Ozzelo of high school graduates of cooperative training in which they dealt with two cohorts; they followed up 1963 graduates ten months after graduation (in 1964) and also included in the 1964 survey a sample of 1962 graduates previously studied in 1963.[14]

B. Complex Research Studies

In the past, complex research studies in the field of student follow-up have been most often undertaken by researchers affiliated with universities or private research organization; most often they have been supported by foundations or the Federal government. They usually fall into one of two categories: diagnostic studies, which search for possible causes in evaluating a situation, and experimental studies, which try to create new situations by manipulating the environment and introducing experimental factors to gain an understanding of the actual operation of a system. In these terms the experimental design tries to use the traditional scientific experimental method modified for the study of human social problems. For example, Coster used an experimental design to assess the factors in vocational agricultural education which prepare students for agricultural occupations other than farming. He did this by comparing three groups who received three different types of vocational training--work experience, classroom study, or part-time work--part-time study. In a similar study, Twyman studied the effects of three different types of education--vocational, academic, or vocational and academic combined--on the career outcomes of high school dropouts who were re-enrolled in school and assigned to one of three groups. These studies manipulate the training situation and then draw conclusions from the differing results of the respective training methods.[15]

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[13] National League for Nursing, Inc. Nurse Career Pattern Study. New York: 1962.

[14] Peter G. Haines, and Lawrence M. Ozzelo. How High School Cooperative Trainees Fare in the Labor Market: Phase B. (Educational Research Series, 23), East Lansing: Bureau of Educational Research Services, College of Education, Michigan State University, 1965.

In a more unorthodox experiment Kaufman used different types of "opportunities" for high school dropouts to assess the economic and psychological effects of the differential situational settings. The "opportunities" involved were the opportunity to earn a high school diploma or to receive training for a specific occupation.[16]

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[15] John K. Coster. An Experiment Evaluation of Approaches to Preparing High School Students for Agricultural Occupations Other Than Farming. Washington, D. C.: United States Office of Education, 1965.
J. Pascal Twyman (Project Director). School Dropout Research Project. Stillwater: Research Foundation, Oklahoma State University, 1965.

[16] Jacob J. Kaufman. An Experimental Program to Compare Education Versus Training for Young School Dropouts. (Mimeographed Project Summary, Sponsored by the U. S. Office of Education, Bureau of Research.)

Diagnostic studies are far more common. The diagnostic design tries to measure various dimensions and aspects of a problem to broaden the basis for understanding. Characteristic of the use of this design is a series of studies being conducted by Ulman in California concerned with the relationship of the labor market to vocational education needs. Data gathering for this study involves surveying employers, union officials, employment and placement service personnel, as well as high school dropouts and graduates.[17] Other diagnostic studies of vocational education students have used the explanatory methodology to study the part played by vocational education in the working lives of graduate trainees and the effectiveness of vocational education.

Data for these studies is collected from all or any of the sources which are connected with vocational education including direct questioning (by mail or interview) of the individual concerned. Instruments commonly used to gather data include psychological tests, school records, and check lists of activities. Analysis is extensive and deeply involved in psychological, sociological, and economic dimensions. Several such studies have been recently completed or are currently in progress, and their results have important program implications.[18]

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[17] Lloyd Ulman. Entry and Job Change in a Large Metropolitan Labor Market Area. Berkeley: Institute of Industrial Relations, University of California, 1966.

[18] Jacob J. Kaufman, and Carl J. Shaefer et. al. The Role of the Secondary Schools in the Preparation of Youth for Employment. University Park: Institute for Research on Human Resources, Pennsylvania State University, 1967.

William H. Sewell. Factors in Educational and Occupational Aspiration and Achievement. Madison: Center for Studies in Vocational and Technical Education, University of Wisconsin.

Another approach to the diagnostic follow-up study of vocational students is primarily comparative, and involves groups who have received different types of vocational education. Its purpose is to find explanations for differing qualities and types of vocational training. Types of comparisons have involved differences of race, academic versus vocational training, completion and noncompletion of training, and on-the-job training versus institutional training.

With the development of sophisticated computer techniques and programs--enabling researchers to handle simultaneously a very large number of variables--it is possible, at least in theory, to design diagnostic studies which encompass the total vocational education system. Project Talent with its design for detailed analysis of the American high school and high school students over an extended time span might have done this type of analysis easily if a larger number of vocational schools had been included in the sample. However, thirty-five vocational schools in a national sample of 17,878 high schools did not yield sufficient data for comparisons between vocational and nonvocational school systems and students.[19]

The previously cited study conducted by Eninger, which dealt with 3 cohorts of graduates of T & I programs and compared them with their contemporaries in other programs comes perhaps closest to meeting the objectives of a comprehensive research study in this field: it sought to analyze the process and product of vocational education by looking at the total system. Vocational outcome is seen as the product of the interaction of the vocational school system, the vocational human (the student) and regional vocational characteristics (the job opportunity structure).[20]

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[19] J. C. Flanagan, et. al. The American High School Student. (Technical Report to the U. S. Office of Education, Cooperative Research Project No. 635), Pittsburgh, Pennsylvania: Project TALENT Office, University of Pittsburgh, 1964.

At the present time a major nationwide study along similar lines is under way as a cooperative undertaking between the University of Wisconsin, the Educational Systems Research Institute in Pittsburgh, and the Bureau of Social Science Research in Washington, D. C. It is based on a sample of secondary, postsecondary, and 2-year college programs and anticipates the collection of information from approximately 350 high schools, 100 postsecondary institutions and 80 junior colleges or 4-year colleges with 2-year programs. From these institutions, approximately 12,000 graduates and 3,000 dropouts will be studied by way of a mail questionnaire, one version of which is attached to this paper. From this study, it will be possible to examine the effectiveness of various types of programs in terms of the level at which they are offered (high school versus post high school) while controlling for certain student characteristics (such as sex, race, socioeconomic status) as well as school characteristics.

These newer studies represent a radical change in the evaluation of vocational education, which up to this time has relied on much more modest data sources to make evaluative judgments. From the point of view of an individual school system, such studies may require greater research efforts than many systems are equipped to put forward. However, under a cooperative research effort on the part of several systems or states, evaluation programs along the lines suggested here might well be feasible. We see the periodic follow-up study, conducted perhaps at 2- or 3-year intervals, as the most productive design, since a program of successive cohort studies yields both immediate feedback and trend information, provided the program is designed with this dual purpose in mind.

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[20] Eninger, op. cit.

There is every reason to believe that with the initiation of comprehensive follow-up studies of this type both on a national and regional or local basis a clearer picture of the actual workings and effectiveness of vocational training would be obtained. Such studies, in conjunction with other approaches, should bring the field of vocational education closer to achieving the ambitious goals which are held out to it at this time.

Note

Detailed guidelines for conducting student follow-up studies can be obtained from the U. S. Office of Education, Division of Vocational and Technical Education and the American Association of Junior Colleges, Washington, D. C. Especially recommended is the AAJC publication "Follow-up Studies in Junior Colleges: A Tool for Institutional Improvement" by Thomas J. O'Connor (1965) which contains recommendations for specific study procedures as well as model forms.

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STATE and NATIONAL LICENSING EXAMINATIONS AS A TECHNIQUE FOR EVALUATING VOCATIONAL-TECHNICAL EDUCATION

by

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Prepared for the
National Conference on Evaluating Vocational and Technical Education Programs
Atlantic City, New Jersey
October 6 - 9, 1968

Educational Testing Service
Princeton, New Jersey

STATE and NATIONAL LICENSING EXAMINATIONS AS A TECHNIQUE FOR EVALUATING VOCATIONAL-TECHNICAL EDUCATION

by
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Educational Testing Service

Since examinations are required as part of the licensing process for certain occupations--mainly those which involve the public health and safety--it seems reasonable to ask whether such examinations might not also serve as a means of evaluating the programs that prepare people for these occupations.

It would serve no useful purpose to attempt to catalog the different occupations that are licensed by national agencies, by state governments, or by city or county jurisdictions. The list would certainly be a long one, and there would be tremendous diversity from one locality to the next.

A recent study of licensing in five states may, however, provide some useful insights into the more commonly licensed occupations and provide information about the examinations used in licensing practitioners. The study in question was financed by the U.S. Department of Labor to determine the impact of licensing practices on the availability and mobility of non-professional manpower in occupations where skill shortages exist.

Five large states in different parts of the country were selected for study: New York, California, Texas, Illinois, and Florida. While the findings cannot be generalized to the nation as a whole, there is reason to believe that licensing practices in other states do not vary markedly from those observed in these five pilot study states.

The study was based on personal interviews with state officials who oversee the activities of the various licensing boards and with the executive officers of boards responsible for administering laws relating

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Prepared for the National Conference on Evaluating Vocational and Technical Education Programs, Atlantic City, New Jersey, October 6-9, 1968 to specific occupations. The focus was on the following seven occupations classified as "skill shortage" occupations and two not so designated.

TABLE I

Skill Shortage Occupations	Written Exams	Performance Exams
Aviation Mechanics	X	X
Practical Nurses	X	
Dental Hygienists	X	X
Plumbers	X	X
Ophthalmic Dispensers	X	X
Psychiatric Technicians	X	
Clinical Laboratory Personnel	X	X
Other Occupations		
Cosmetology	X	X
Barbering	X	X

Although the pilot study was focussed primarily on licensing at the state level, it should be noted that one of the occupations--aviation mechanics--was licensed by a federal agency and that several occupations were licensed only by local governments or by both local and state governments. For example, in some states plumbers and electricians are licensed at the state level; in others the responsibility is left to the municipalities.

THE EXAMINATION PROCESS

All but two of the occupations listed in Table I involve both written and performance examinations. Three are prepared nationally (one by a governmental agency, and two under the auspices of professional organizations), and the others by state or local licensing boards. Since the test development and administrative procedures for the national examinations differ markedly from those prepared by individual boards, the two types will be discussed separately.

Nationally Prepared Examinations

Practical Nursing

Practical nursing is licensed in all 50 states and all licensing boards now use the examination prepared by the National League for Nursing (NLN) under the sponsorship of the American Nurses Association. A new form of the examination is developed each year by representatives of various state licensing boards and the professional staff of NLN. A Blueprint Committee appointed by various states on a rotating basis first prepares the specifications for the examination. The various states are then asked to nominate highly qualified subject matter experts to serve as item writers. These test development committees (generally consisting of six members) meet with the NLN staff to prepare questions about their particular specialties. The questions are edited by the NLN staff and assembled into test books that are then sent to each state board for review. Comments and suggestions received from the various boards are used to modify or eliminate questions prior to the assembly of a preliminary form of the examination, which is then administered to applicants in a cross section of states. The results are subjected to item analysis to determine which items should be retained in the final form

The examination requires four hours of testing time--two hours in the morning and two hours in the afternoon. Answer sheets are scored by NLN on electronic test scoring equipment. The applicant who fails is required to retake the entire examination. No partial credit is given nor is the candidate advised of his areas of weakness.

At one time the examination included a performance test in addition to the written test. However, the performance test was discarded because of the time and effort involved and because it seemed to serve no useful purpose.

Dental Hygienists

The examination in this field is prepared by the National Board of Dental Examiners, under the sponsorship of the American Dental Association. Examinations are given during April and July. Licensing boards in 44 states are currently using this examination to satisfy the written portion of the examination process. Each board makes and administers its own practical examination.

The dental hygiene examination consists of four parts, which must be completed in one day.

I - General Anatomy, Dental Anatomy, Physiology
II - Histology, Pathology, Radiology
III - Chemistry, Nutrition, Microbiology
IV - Pharmacology, Dental Materials, Preventative Aspects of Dentistry

Questions are of the multiple-choice variety and are prepared by twelve test development committees appointed by the Board of Examiners. Test specifications are prepared in consultation with dental hygiene educators and state board examiners. Questions are received from contributors in all parts of the country. These are reviewed and edited by the Test Construction Committee to insure consistency of form and to determine the appropriateness of each item. The examinations are administered in special centers located in 39 states.

The practical examination (which is developed and administered by state licensing boards) generally involves treating a patient suffering from sub-gingival inflamation, a relatively common ailment. The state of Illinois, for example, requires in addition to performing the prophylaxis (cleaning teeth) that the candidates take, process, mount, and chart a full mouth X-ray. Applicants furnish their own patients (who must have sub-gingival inflamation). During the practical examination, candidates may be asked questions about conditions found in the patient's mouth.

Aviation Mechanics

Aircraft mechanics are certified by the Federal Aviation Administration. Separate ratings are given for "airframe mechanic" and for "power plant mechanic".

The written examinations are prepared by a central FAA facility in Oklahoma City. The examination is divided into three parts (1) a ground section, (2) an airframe section, and (3) a power plant section.

The airframe examination presently in use consists of five sections, for which five hours of testing time is allotted. The power plant examination has six sections, for which six hours are allowed. In practice, applicants spend only about half the allotted time taking these examinations. The examinations are of the multiple-choice type. An individual who fails an examination may retake it after 30 days. If a separate grade is given for each section, only the failed sections must be retaken.

After he has passed the written examination, the applicant must arrange to take the oral and practical examinations, which are given simultaneously. Typical work assignments in the oral and practical examinations would be:

- Make a sheet metal splice
- Make a wood spar splice
- Rib stitch a wing
- Attach an electrical cable terminal
- Bleed and adjust hydraulic brakes
- Time the valves of an engine
- Adjust carburetor float level
- Remove and install a propeller

The examiner may ask the applicant questions like the following as he carries out the work assignment:

- What is a circuit breaker and how does it work?
- What causes vapor lock in a fuel line?
- How would you check a propeller for correct track?
- What is the purpose of a pump unloading valve in a hydraulic system?

The individual wishing to take the oral and practical examination must furnish or arrange for the facility, materials, and supplies required for the examination. These examinations require about six hours and are administered by FAA inspectors or by FAA designated mechanic examiners. Individual circumstances may make examination by one more convenient than by the other. The scope of the examination is said to be the same in either case.

The mechanic examiners are private individuals authorized by FAA to conduct tests for the agency. They are not employed by or reimbursed by FAA for their time, the use of their facilities or materials; consequently, they are authorized to charge a fee (amount unspecified by the FAA) for administering examinations.

FAA inspectors and designated mechanic examiners are provided with a Mechanic Examiner's Handbook that suggests procedures and questions for oral and practical examinations. However, examiners are not limited to the Handbook and may ask others they feel are appropriate. Standards for evaluating the oral and practical examinations have been established and are maintained by the FAA largely through personal contact with examiners, rather than through written publications.

The oral and practical examinations are graded by the examiner as soon as they are completed. If any part of the oral or practical examination is failed, the examiner records the titles of the sections failed on a special form and returns it to the FAA. An applicant who fails has the option of returning to the same examiner or he may seek out another qualified examiner to administer the retest. The thirty day waiting period may be waived (as in the case of the written examination) if the applicant can present evidence that he has received training from a qualified instructor in the topics he failed.

In July, 1968, the present examination was scheduled to be replaced by two new three-section tests. About four hours of testing time will be needed to complete each examination. The

FAA is also reviewing its oral and practical examination procedures to determine what can be done to standardize the administration and scoring of these tests.

Examinations Prepared by State and Local Boards

Examining procedures used by state and local boards vary so widely that generalization is difficult. However, several case studies may serve to illustrate how the examining procedures used by different boards may change from occupation to occupation as well as within an occupation.

1. Plumbers

   How two states and one municipality differ in their examination of plumbers may be illustrated by describing briefly the procedures used by state licensing boards in Illinois and Texas and by a local licensing board in Hillsborough County, Florida.

   A. Illinois: The examination is administered four times a year in Springfield, the State Capitol.

      It consists of three sections; the first part is made up of 25 short answer (essay) questions drawn from city and state plumbing codes; the second part is a practical test in which the candidate has the option of working either with lead or copper and cast iron (he must provide his own tools and equipment); the third part requires him to sketch solutions to various venting and installation problems.

      The examination questions and problems are prepared by board members and are not tried out before being used. There are four or five forms of the test available for use at any given time. The practical examination is administered and scored by two committee members. The present tests were developed in 1964 and revised in 1967.

      While scoring sheets for the various examinations were not available, it appears that the entire examination is graded on the basis of 100 points: 25 points for the first section (knowledge of city and state plumbing codes), 50 points for the practical examination, and 25 points for the applied-theory examination. A "75" average over all three parts (with no score below 60) is required for passing. Any portion of the examination that is passed on the first attempt does not need to be repeated. The Professional Licensing Supervisor indicated that most applicants pass on their third try.

B. Texas: Applicants must take the plumbing examination at a special examination center located in Austin. It contains both a written and a performance test. A 60-item multiple-choice test covers the theory of sanitary plumbing, including such topics as waste vents, gas systems, water supply systems, cross connections, back siphonage, simple physics, and also terms and definitions. Hot water circulation is covered by the use of a chart on which the examinee draws in a gravity type hot water circulation system to supply hot water to fixtures shown on the chart. The written examination questions were originally obtained by writing the local plumbers' unions and the city examination boards (who were then doing the testing). These items formed the basis of the original 1947 examination and continue to provide the basic format for the present examination. From time to time, the board has hired examination experts to perform item analyses of the written section of the examination. The most recent analysis was made in 1954 by a doctoral candidate at the University of Texas.

The performance examination consists of two parts:

(a) Shop work consisting of using tools in bending and wiping lead; measuring, cutting, reaming and sweating copper pipe; bending and flaring copper tubing; measuring, cutting, reaming and threading galvanized pipe; measuring, cutting and caulking soil pipe; adjusting a gas burner; and identifying certain gas controls. The board furnishes all necessary tools and materials, except work gloves.

(b) The examinees' ability to lay out and install a sanitary waste and vent system is tested by the use of a minature house which is one-fifth actual size and has minature pipe and fittings, also one-fifth actual size. The examinee is given a plan and instructed to order the necessary materials. His order is filled from a nearby stock room and he proceeds to plumb the house. Applicants for a journeyman's license install the plumbing in a one story house, while applicants for the master's license install plumbing in a two story house.

C. Hillsborough County, Florida: A committee of three to five people is appointed to make up the examination. Since these are generally very busy contractors, they usually go through old examinations and pick out questions that they feel are appropriate. They have a pool of 300 questions to draw from. Occasionally they make up new ones to replace those that become obsolete. The test is not reviewed by anyone. The examination questions are given directly to a typist in the office of the Building Inspector who proceeds to type up a final copy of the examination.

Examinations are administered four times a year. Each answer sheet is scored by three board members. Answer sheets are identified by number only. If board members disagree with the answer that was chosen by the committee, they may grant credit for other answers as well. If the board finds that too many people miss a question, they may omit the question from the test. This is done, according to the board secretary, "so as not to penalize the common man."

The passing grade is set at 75. If an individual scores between 69 and 74, he may be given an additional test on the local building code to allow him to bring his score up to 75.

2. Ophthalmic Dispensers

The ophthalmic dispenser is limited by law to the grinding and sale of eye glasses and other optical devices (such as contact lenses). He is not permitted to examine eyes or write prescriptions. He fills prescriptions written by ophthalmologists, oculists, or optometrists.

The procedure used in New York state will illustrate what the examination entails. The written examination is prepared by the Advisory Board and is edited by the Bureau of Higher and Professional Educational Testing. It is administered twice annually in New York City, Buffalo, Syracuse, and Albany.

The written examination consists of six subtests, for which the total testing time is 15 hours, spread over three days. The six subtests are:

1. Mathematics (1½ hours)
2. Physics (1½ hours)
3. Ophthalmic materials and laboratory (3 hours)
4. Ophthalmic optics (3 hours)
5. Ophthalmic dispensing (3 hours)
6. Contact lenses and anatomy and physiology of the eye (3 hours)

In order to pass the written examination, candidates must attain an average score of 75% over the six subtests, with only one allowable score between 65% and 75%.

About three days after completion of the written examination, candidates are expected to report for a performance test which is held in Buffalo and New York City. All candidates must take this portion of the examination, even though many will not have passed the written portion. It is administered by the three ophthalmic dispensers who are on the Advisory Board, two in one of the locations and one in the other. Four or five experienced licensed ophthalmic dispensers from each of the two cities are hired as "assistant examiners" to aid the board members in the administration.

The performance examination consists of having the candidate actually perform tasks that would be required of him if a patient were to request that he fill a prescription. He must demonstrate to the examiners a familiarity with the machines found in the laboratory of an ophthalmic dispenser. He is asked to interpret the prescription to the examiners and to fit and adjust spectacles after first inserting the lenses into the frames. He is expected to demonstrate knowledge of how to use the equipment necessary to fit contact lenses, though he need not actually fit them. During the examination, the examiners play the role of patients and ask the candidates relevant questions. The candidate is rated on his answers with special emphasis on the ethics of his answers. (For instance, he should not prescribe for the patient.) All scoring during the performance examination is subjective.

3. Cosmetologists

Cosmetologists are licensed in each of the 50 states and each board is responsible for its own examining procedures. While several of the boards visited in the study actually wrote their own examination questions, others simply selected questions from a commercially prepared booklet containing several hundred questions culled from old state board examinations. There was no evidence that any of the boards in the pilot states tries out questions prior to using them in an examination or item analyzes them afterward. Hence, no information is available about the difficulty or discriminating power of individual questions. All items are considered to be of equal difficulty. When these items are assembled into test forms, one form is assumed to be equivalent to any other. This assumption has not been verified statistically in any of the states visited, nor have any studies been made to determine the reliability of the examinations.

The practical examination generally covers such topics as scalp treatment, facials, hair coloring, permanent waving, hair shaping, shampooing, finger waving, styling, manicuring, and pedicuring. An examiner may be responsible for testing about ten applicants. He first explains what is expected, and then tells the group to start carrying out a single operation, such as a scalp treatment. They do simultaneously while the examiner observes and rates each. In some states, examiners have guide cards giving general criteria to use in making ratings. However, these are often ambiguous or double-barreled, so that more than one characteristic is being rated. As a whole the entire examination is conducted by a single examiner. Occasionally, he will call in another examiner to help make a judgment about a borderline case. States vary in the procedures for indoctrinating and training new examiners. It seems that once an examiner has been "checked out" his performance is seldom if ever reviewed to determine how closely he adheres to the board's "standards".

Discussion

With the exception of the national examinations in Practical Nursing and Dental Hygiene, it is obvious that the quality of licensing examinations leave much to be desired. There is an acute lack of professionalism in the preparation of most licensing examinations. While virtually all such examinations are written by board members who are specialists in a given occupation, few have any expertise in the field of testing.

As far as could be determined, most boards prepare their examinations without a set of content specifications. Although individual board members undoubtedly have their own ideas as to what is important, these are seldom made explicit or reduced to a "blueprint" as is done in Practical Nursing. The test building process appears to be very haphazard. Quite often it consists of nothing more than leafing through old examinations to pick out suitable questions. When questions are written by board members, they are reviewed by others on the board, but seldom by outside experts or by measurement specialists. There were indications that a few boards occasionally made use of measurement specialists from other departments of government or from nearby universities, but these seemed to be exceptions rather than the rule. Only rarely was there evidence of test questions having been pretested or subjected even to a crude item analysis. No information was available regarding the difficulty or discriminating power of individual items, nor was there evidence that reliability of tests or the comparability of different forms had been investigated.

The practical examinations show a similar lack of sophistication regarding modern testing procedures. Although applicants are given standard tasks, the raters rely heavily on subjective judgments in making their evaluations. As noted earlier, guidelines for evaluating performance were generally absent or inadequate. Moreover, most evaluations were performed by a single examiner, which raises serious doubt about the matter of interrater reliability.

What was perhaps most disturbing in these observations was the almost total lack of concern about any of the problems enumerated above. Most boards felt that they were doing a sound and conscientious job of evaluating applicants and they seemed to be completely oblivious to the inequities that might arise as a result of the procedures used. It is also worth noting that while the two national programs developed their examinations in close cooperation with leaders from training institutions, there appeared to be little or no involvement of vocational educators in the examining process at the state or local level--a very serious omission indeed. For example, a number of vocational educators have complained that the licensing examinations in some fields contain questions about procedures and equipment no longer used in the industry. They have lamented both the absence of up-to-date content and the inclusion of questions about matter of little importance. They also feel that in some cases licensing examinations may have a retrogressive effect on the curriculum, since they force the vocational educator to cover obsolete or unimportant material simply because it is likely to be found on the examination.

Conclusion

The examining procedures used for licensure in most occupations do not, at the present time, offer much promise as a basis for evaluating the outcomes of vocational education. The following observations seem in order:

1. Lack of communication between licensing boards and those involved in vocational education poses a serious problem. Unless vocational educators are involved in setting the goals and standards, the licensing examination will remain separate and apart from the educational process. To the

extent that the educator accepts the goals and values embodied in the licensing examination, he can use the results for program evaluation and for evaluating individual performance.

2. The lack of professionalism in developing, administering, and scoring licensing examinations raises serious doubts about their usefulness as a means of evaluating vocational education. Examinations that are developed by specialists in measurement do offer promise as evaluation tools.

3. Even professionally developed examinations may not adequately serve the evaluation needs of vocational education if the licensing agency is primarily concerned with minimum standards, while the vocational educator is concerned with the highest possible level of achievement. To adequately measure the latter would involve examinations with a greater depth and breadth than the typical licensing examination.

4. It should be recognized that some boards are made up of practitioners who may have a vested interest in keeping down the number of new licenses. When a board is motivated to exclude applicants it may do so in many ways: by raising education, training, and experience requirements; by introducing criteria that may not be relevant; or by making the examination so difficult that a high proportion of applicants will fail. The absence of well-defined criteria and the subjective nature of the performance examination makes this relatively easy to accomplish. Thus, in one community, out of 26 applicants for journeyman plumber only 8 passed (most of these on their second or third attempt). Out of 10 applicants for master plumber, only 1 passed! It is interesting to contrast this with the pass rate in the field of Practical Nursing where approximately 94% of the applicants characteristically pass. Needless to say, whenever licensing examinations are being used as an exclusionary device they are not likely to be suitable for evaluating the outcome of a vocational-technical program.

5. There are indications that some state and federal licensing agencies are beginning to recognize the potential benefits of professionally-developed national examinations. Cosmetology is rapidly moving toward a national examination program. Also, the United States Coast Guard, which licenses all deck and engineering officers in the United States Merchant Marine, has taken steps to overhaul its present procedures to bring them into line with modern testing techniques.

   The concern of the Department of Labor about the mobility of skilled workers may give further impetus to this movement, since national examinations will do much to facilitate licensing by endorsement.

In the long run, the involvement of examination specialists may bring those who do the training and those who do the licensing much closer together. When this happens, prospects will likely brighten. Licensing examinations may yet provide a dependable and meaningful way of evaluating occupational proficiency.

8/27/68